IDAHO DEPARTMENT OF FISH AND GAME

Ed Schriever, Director

Surveys and Inventories

Statewide Report
Fall 2019 Season

ELK

July 1, 2018 to June 30, 2019

Prepared by:

Micah Ellstrom..... Panhandle Region
Clay Hickey ..... Clearwater Region
Rick Ward ..... Southwest (Nampa) Region
Regan Berkley.....Southwest (McCall) Region
Mike McDonald ..... Magic Valley Region
Zach Lockyer ..... Southeast Region
Curtis Hendricks ..... Upper Snake Region
Greg Painter .....Salmon Region
Erin Roche .....Biometrician
Mike Elmer .....Data Coordinator
David Smith .....Grants/Contracts Specialist

Compiled and edited by: Daryl R. Meints, Deer and Elk Coordinator

2019
Boise, Idaho

Idaho Department of Fish and Game (Department) adheres to all applicable state and federal laws and regulations related to discrimination on the basis of race, color, national origin, age, gender, disability or veteran's status. If you feel you have been discriminated against in any program, activity, or facility of the Department, or if you desire further information, please write to: Idaho Department of Fish and Game, PO Box 25, Boise, ID 83707 or US Fish and Wildlife Service, Division of Wildlife and Sport Fish Restoration Program, 5275 Leesburg Pike, MS: WSFR, Falls Church, VA 22041-3803, Telephone: (703) 358-2156. This publication will be made available in alternative formats upon request. Please contact the Department for assistance.

Please note that the Department databases containing this information are dynamic. Records are added, deleted, and/or edited on a frequent basis. This information was current as of the date of this report. Raw data do not have the benefit of interpretation or synthesis by the Department.

The Department requests that you direct any requests for this information to us rather than forwarding this information to third parties.

TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

LIST OF FIGURES

TABLE OF CONTENTS (Continued)

STATEWIDE REPORT

SURVEYS AND INVENTORY

JOB TITLE: Elk Surveys and Inventories

STUDY NAME: Elk Population Status, Trends, Use, and Associated Habitat Studies

PERIOD COVERED: July 1, 2018 to June 30, 2019

STATEWIDE

Summary

Rocky Mountain elk are one of Idaho's premier big game animals. Elk are distributed throughout the state from the sagebrush-dominated deserts of the south to the dense cedar-hemlock forests of the north.

Unlike deer, elk populations may be highly influenced by harvest. Although not the case everywhere, most annual mortality of elk is associated with human harvest. Total elk harvest increased steadily through the 1980s and peaked in the mid-1990s. The goal of harvest management is to establish elk population objectives and establish harvest opportunities that are consistent with achieving or maintaining these population objectives. We established objectives for wintering populations of cows, total bulls, and adult (3.5+ pre-season) bulls in each elk zone across the state. The state has been divided into 29 elk management zones (groupings of game management units), dependent upon habitat similarity, management similarity, and/or discrete populations (Figure 1). The Idaho Fish and Game Commission (Commission) adopted a statewide minimum objective of 10 adult bulls:100 cows pre-season. Total population objectives were chosen based on habitat potential, harvest opportunity, depredation concerns, inter-specific issues, population performance issues, and winter feeding issues.

Survey and Monitoring

Population surveys were conducted in the Hells Canyon, Weiser and Brownlee elk zones. Across the state, 17 of 22 zones with numerical population survey goals are meeting cow population objectives and 17 of 22 zones with numerical population survey goals are meeting bull population objectives. In 9 elk zones across the state, cow elk populations are above objective and in some cases causing significant private land depredations. The Department has substantially increased antlerless hunting opportunity in these areas. Five elk zones in north central Idaho are not meeting cow or bull population objectives. It is likely that these elk populations are influenced by a complex combination of habitat condition/characteristics and predator systems. It is also likely that temporal changes in weather patterns and precipitation affect the relative role of habitat and predators.

Capture, Radio-mark, and/or Telemetry Monitoring

Across the state, 774 radio collared elk were monitored throughout the winter. Adult cow survival was 96% and calf survival was 69%. Leading cause of mortality for both adult cow elk and calves was mountain lions.

Estimating Harvest

During the 2018 hunting season 109,626 hunters pursued elk across the state of Idaho. Hunters took 22,326 elk of which 11,328 were antlered and 10,998 antlerless. Of the antlered animals taken 44% had at least 6 points on one side.

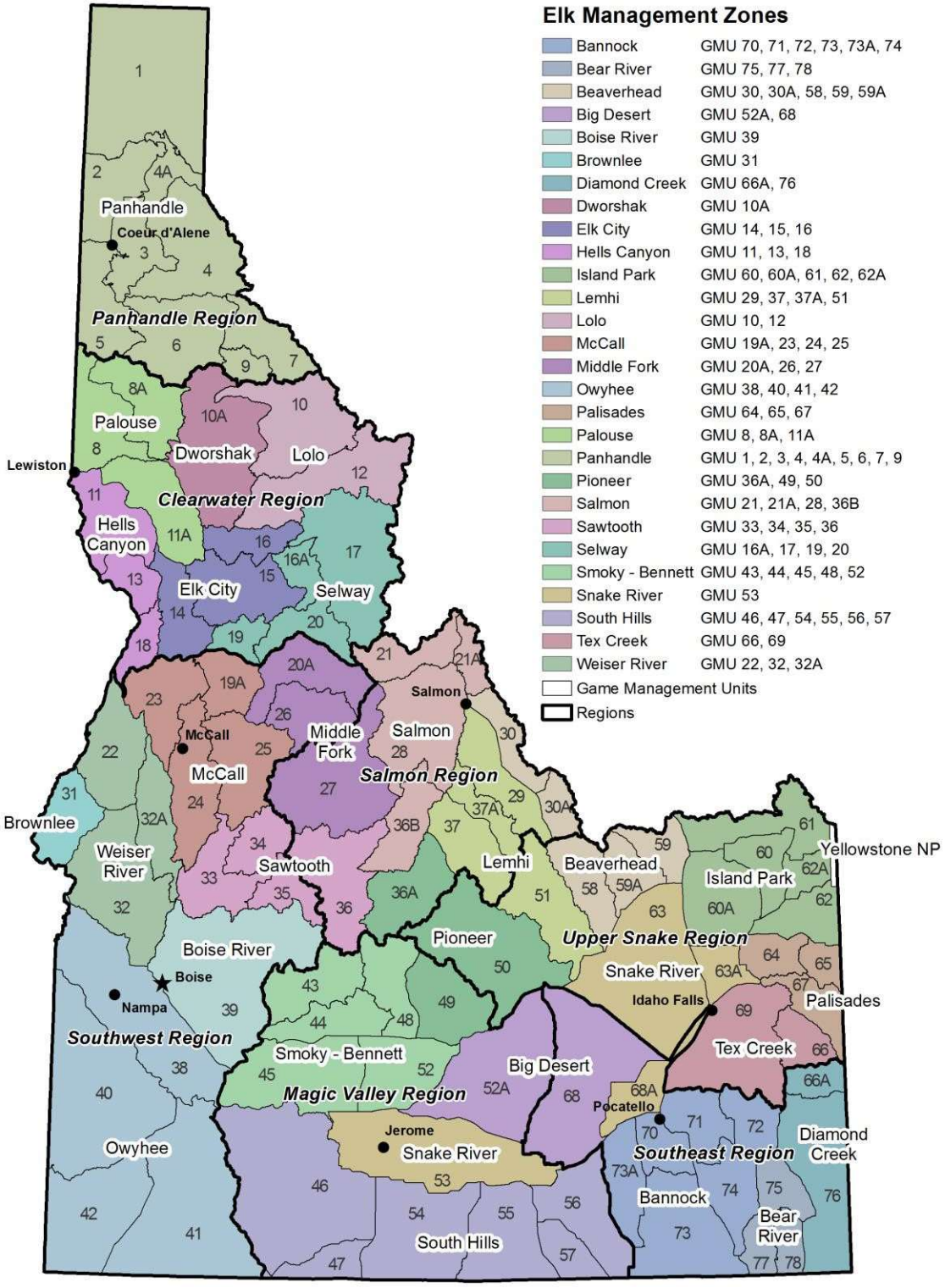


Figure 1. Statewide Elk Management Zones.

Elk Status & Objectives Statewide

Square Miles = 83,261	3-Year Averages		
% Public Land 67%	Hunters per square mile =	1.28	
	Harvest per square mile =	0.52	
	Success Rate =	21%	
	%6+ Points =	43%	

Winter Status & Objectives

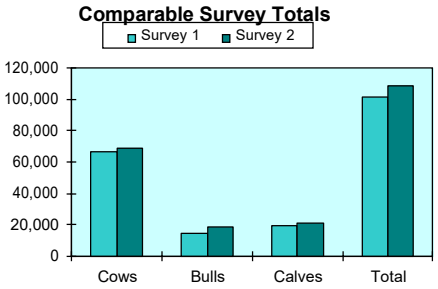
Statewide	Current Status				Objective		
	Cows	Bulls	Calves	Adult Bulls	Cows	Bulls	Adult Bulls
Total	69,285	18,307	21,225	11,594	55,975-80,600	12,817-19,662	7,418-11,719
Per 100 Cows		26	31	17		18-24	10 - 14

Note: Results are only from those Elk Zones where surveys are conducted.

Population Surveys

Statewide	Survey 1				Survey 2			
Comparable Surveys Total	Cows	Bulls	Calves	Total	Cows	Bulls	Calves	Total
	66,424	15,029	19,273	101,095	69,285	18,307	21,225	108,836
Per 100 Cows		23	29			26	31	

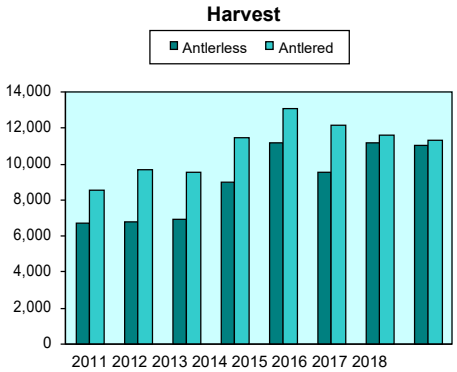
Note: Results are only from those Elk Zones where surveys are conducted.

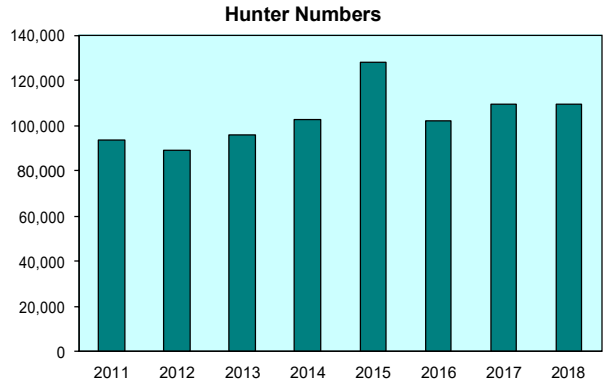


Zone Harvest Statistics

	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	6,692	6,770	6,928	8,972	11,178	9,557	11,155	10,998
'A' Tag	2,317	2,508	2,231	3,087	3,908	3,132	2,708	3,370
'B' Tag	781	107	134	448	172	217	1,391	1,138
CH Tag	3,594	4,155	4,563	5,437	7,098	6,208	7,056	6,490
Antlered Harvest	8,572	9,652	9,558	11,452	13,052	12,124	11,607	11,328
'A' Tag	2,421	2,806	2,707	3,603	4,110	3,826	3,820	3,808
'B' Tag	4,453	4,869	4,755	5,674	6,572	6,116	5,367	5,158
CH Tag	1,698	1,977	2,096	2,175	2,370	2,182	2,420	2,362
Hunter Numbers	93,475	89,231	95,986	102,901	127,719	101,968	109,129	109,626
'A' Tag	33,779	34,203	35,460	37,436	49,807	36,622	38,109	40,900
'B' Tag	45,309	38,739	40,733	44,996	53,905	43,195	48,308	46,183
CH Tag	14,387	16,289	19,793	20,469	24,007	22,151	22,712	22,543
% 6+ Points	38	42	42	43	45	42	43	44

Note: % 6+ pts does not include spike-only harvest.





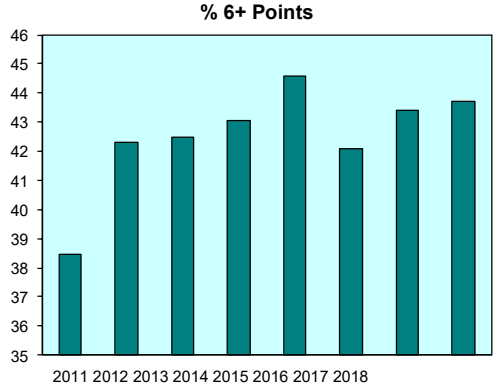


Figure 2. Statewide Elk Status and Objectives.

Panhandle Zone (GMUs 1, 2, 3, 4, 4A, 5, 6, 7, 9)

Historical Background

The Panhandle Zone is a large and diverse zone consisting of GMUs 1, 2, 3, 4, 4A, 5, 6, 7, and 9. Traditionally, the majority of elk habitat, elk numbers, and elk hunting activity occurred in GMUs 4, 4A, 6, 7, and 9. These GMUs are primarily composed of forested public lands and private timber companies and consistently recorded some of the highest hunter densities and elk harvest densities in the state. Expanding elk herds have recently increased hunter activities in GMUs 1, 2, 3, and 5, particularly in the agricultural areas of GMUs 1, 3 and 5.

The Panhandle Region has essentially been managed as a "zone" since 1977, when the rest of the state eliminated general season cow harvest. The Panhandle Zone maintained general either-sex hunting opportunities with fairly consistent hunting seasons across most of the GMUs (Appendix A) until 2012 when cow harvest was restricted to controlled hunts. From 1982-2003, a unique feature of the Panhandle Zone was a mandatory check of all elk harvested in the zone. Throughout this period, over 42,000 elk were reported via the Panhandle Mandatory Check program database. This database provided valuable information relevant to the elk population. Beginning with the 2004 season, harvest information for the Panhandle Zone was estimated by the statewide Mandatory Harvest Report system.

In response to low calf recruitment, low adult cow survival and concerns about hunter movements, the Panhandle staff proposed significant changes to 2012 elk seasons. Following a series of very contentious public meetings the Commission approved the most restrictive elk seasons in modern times, where general seasons (any weapon, archery and muzzleloader) in the Panhandle Zone would be "bulls only" and cow harvest was by controlled hunt tag in some GMUs. The 2017-2018 elk hunting seasons in the Panhandle Zone remained relatively restrictive by historical standards, however, a short general either-sex hunt opportunity was offered on the A and B tag (first time in 5 years). The either-sex hunting opportunity was restricted to on or within 1 mile of private land, areas where the elk populations were more robust. No either-sex opportunity was offered in GMUs 7 and 9.

Management Objectives

Objectives for the Panhandle Zone (Figure 3) are based upon population trends generated from calf:cow ratios measured via aerial surveys of the Panhandle Zone Bellwether Area (portions of GMUs 4, 6, and 7) and harvest statistics in GMUs outside the Bellwether Area. Calf:cow composition surveys to assess elk recruitment were not conducted during 2018 and 2019 due to poor weather conditions and pilot unavailability. The 2016 results indicated that calf numbers were the highest they've been in seven years in portions of the St Joe River drainage (GMUs 6 and 7) and are trending upwards. Recruitment levels in GMU 4 were higher than they've been in 4 years and are also trending upwards.

Habitat Management and Monitoring

Elk numbers were very low in the Panhandle Zone around the early 1900s. Major landscape changes occurred as a result of stand-replacing fires beginning in 1910. Vast areas of timber were transformed into brush fields and early succession timber stands that provided ideal conditions for elk. Additionally, elk were imported from Yellowstone National Park by

sportsmen in the 1940s and released in GMUs 1, 4, and 6. Elk populations increased, with periodic setbacks due to extreme winter conditions. While it is generally accepted that habitat conditions in traditional elk areas have declined in quality from better conditions in the 1950s and 1960s, pioneering of elk into new areas has allowed substantial growth. Due to an absence of large-scale stand-replacing fire, elk habitat potential will likely decrease in the long term.

Much of the Panhandle Zone's forested habitat experienced extensive timber harvest during the 1980s and 1990s. While this high level of timber harvest created additional elk forage, the more important impact was the construction of logging roads that allowed hunters easy access to elk and increased elk vulnerability. High road densities and threats to large areas of elk security continue to be a concern despite access management plans developed by land management agencies to address wildlife and watershed issues. Logging has since declined on federal lands but continues at a high rate on industrial timberlands. High road densities continue to put pressure on elk populations.

Biological Objectives

The most significant impact to elk populations in the Panhandle is severe winter weather conditions that result in abnormally deep snow or delayed spring green up. Adult and particularly calf elk survival have been compromised as a result of severe winter conditions that drain body condition, reduce the availability of food and increase their vulnerability to predation.

Capture, Radio-mark, and or Telemetry

An effort to access cow survival was initiated in GMU 6 in 2011. Twenty-one elk were captured and fitted with VHF collars in this GMU between the towns of Avery and Calder in the St Joe River drainage. An additional 18 cows were fitted with VHF collars in 2013 in GMU 6 and GMU 7 around the Avery area. Bi-monthly telemetry flights were conducted to estimate cow survival. The study was expanded into GMUs 3 and 4 in 2014; forty-five elk were fitted with GPS collars. In the winters of 2015 (n = 38), 2017 (n = 41) and 2018 (n = 22) cows were fit were GPS collars in GMU's 4, 6, 7 and 9 (2015 only). Elk are primarily monitored via satellite downloads. GPS collars allow for better determination of survival rates because the collars will provide daily locations and send alerts when mortality is detected. Additionally, the daily locations can be used to develop seasonal habitat models that can be used to provide guidance to land management agencies relative to elk management.

A greater variability in calf numbers and low calf ratios during composition flights in previous years prompted an additional collaring effort to monitor survival of 6-month old calves. From 2015–2019, 263 calves were fitted with GPS collars in GMU's 4, 6, and 7.

The probability of survival for cows from January to May (when most natural mortality occurs) during 2013–2018 was 94% (95% CI = 0.91–0.96). Survival probability for calves from January to May in 2015–2016 was 82% (95% CI = 0.72–0.89), 49% (95% CI = 0.35–0.62) in 2017, 40% survival rate in 2018, and 60% survival rate in 2019. There is strong evidence to suggest that over-winter calf survival is different between managed-forested habitat (i.e., primarily private ownership; 92%, 95% CI = 0.81–0.96) and unmanaged-forested habitat (i.e., primarily federal ownership; 60%, 95% CI = 0.46–0.72). In addition, there is support to suggest that sex and habitat both influence calf survival (managed-forested habitats: Female 95% (0.85–0.98) and

Male 89% (0.76–0.96); unmanaged forested habitats: Female 72% (0.51–0.86) and Male 52% (0.35–0.68)).

Winter 2015, we began collecting cause-specific mortality information to identify sources of elk mortality on GPS collared animals. From January to May in 2015, 83% of calf mortality was mountain lion caused and 17% was wolf caused. From January to May in 2016, 57% of calf mortality was mountain lion caused, 14% wolf caused, 14% unknown mortality, 7% accident related mortality, and 7% disease related mortality. From January to May in 2017, 32% of calf mortality was mountain lion predation, 32% malnutrition, 16% unknown, 13% wolf, 3% disease, and 3% heavy parasite load. From January to May in 2018, 35% of calf mortality was mountain lion predation, 24% wolf, 21% unknown, 12% malnutrition, and 9% accident. From January to May in 2019, 55% of calf mortality was mountain lion predation, 18% malnutrition, 18% unknown, and 9% wolf,

Population Surveys and Monitoring

Due to abundant days with poor weather conditions and pilot unavailability on good weather days, composition flights were not conducted in 2018 or 2019.

Inter-specific Issues

Both white-tailed and mule deer occur in all areas of the zone. White-tailed deer are the predominant deer species and maintain high densities in the lower elevations of GMUs 1, 2, 3, 5, and 6. Mule deer numbers appear to be stable to declining at much lower densities than whitetails and are found most frequently in the higher elevations of GMUs 1, 4, 6, 7, and 9. The moose population in the Panhandle Zone has expanded over past decades with the highest densities occurring in GMUs 1 and 2, although current moose abundance appears to be declining. Competitive interactions may exist among deer, moose, and elk; however, the form and extent of those relationships is presently unclear.

Predation Issues

Mountain lion predation has been the largest source of mortality on collared 6-month old calves during 2015–2019. 2015 and 2016 winters were relatively mild and had high calf survival (82%), however, the 2017 and 2018 winters were above average snowpack (particularly in low elevations) and calf survival decreased to 40–50%. The decrease in calf survival was due primarily to malnutrition, not predation in 2017. However, the decrease in calf survival in 2018 was due to an increase in predation. The 2019 winter conditions began mild and became more severe in February when an abundance of snow fell. The mild onset of winter likely helped calves maintain body condition for longer which resulted in higher survival than the previous 2 winters. Research conducted in adjacent areas of Idaho and other states indicates that black bear predation may have significant impacts on neonatal elk calves.

Cow survival from 2014–2019 has been stable at 94%.

Harvest seasons for black bear, mountain lion, and wolves have become quite liberal in the Panhandle region in recent years and achieving higher levels of harvest is unlikely in future years.

Winter Feeding and Depredation

There were no organized efforts to feed elk during the winter of 2018–2019.

Hunting and Harvest Characteristics

The overall elk harvest in the Panhandle Zone estimated from hunter reports and corrected for non-response, was 3,894 elk in 2018. The estimated antlered elk harvest of 1,767 bulls consisted of 19% six-point or better bulls. This is indicative of a well-defined mature age class with adequate adult bulls for breeding purposes but it may not meet hunter desires. It's likely due to years of low calf recruitment during 2009 –2012, that there are fewer older bulls. During the 2018 season, 2,127 antlerless elk were harvested. The overall hunter success rate for the Zone was estimated at 22% with 19% of the harvest by Panhandle Zone hunters opting for the A tag.

Disease Monitoring

As part of a disease monitoring effort, the state updated and improved our CWD Response and Monitoring Plan in 2017. CWD samples are collected at big game check stations, road-killed carcasses, and from suspect elk. To date, no positive samples have been detected in Idaho.

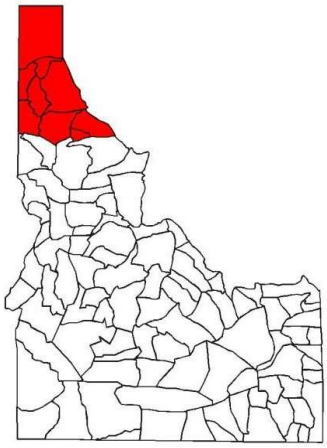
In addition, blood and fecal samples are collected from each elk captured and collared for survival monitoring. These samples are tested for disease surveillance. Other disease concerns will be evaluated on a case by case basis. Any animals that are showing signs of illness will be collected and sent to the health lab for testing.

Management Discussion

Aerial surveys, both population estimates and herd composition surveys, have been a valuable part of regional elk management historically. The homogenous, heavy-cover habitat that typifies the Panhandle Zone necessitated caution when interpreting elk sightability survey results which is why in recent years we now only conduct herd composition surveys and we base our population objectives off of trend rather than numerical objectives while still combining additional information sources (i.e., harvest statistics, weather information, and survival rates of collared cows and calves). In 2014, we identified new population objectives based upon trend data in Idaho's Elk Management Plan 2014–2024. In fall 2018, we deployed 150 remote cameras in GMU 6 on low and high probability use winter range to get a unit-wide estimate of abundance. Analyses and results are currently pending.

Elk

Panhandle Zone (GMUs 1, 2, 3, 4, 4A, 5, 6, 7, 9)



Square Miles =	7,779	3-Year Averages	
% Public Land =	58%	Hunters per square mile =	2.25
Major Land Type =	Forest	Harvest per square mile =	0.96
		Success Rate =	22%
		%6+ Points =	18%

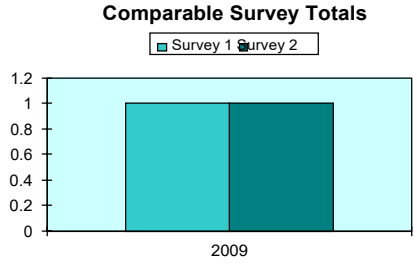
10-yr Population Objectives (Idaho's Elk Management Plan 2014-2024)

GMU	Population Trend		2023 Growth Objective
	Current Status	Objectives	
1	Little change to increasing	Stable to increase	Up to 25% more elk
2, 5	Increasing	Stablize to decrease depending on human population grouwh/agricultural and depredation issues	Within 10% of existing levels
3, 4, 4A	Little Change-GMU 3, Stable to decreasing GMUs 4, 4A	Stabilize	Up to 20% more elk
6, 7, 9	Stable	Increase	Up to 10% more elk

Notes: The Panhandle Elk Trend Area includes parts of GMUs 4, 6, and 7.

Composition surveys-Calf:100 Cow Rations

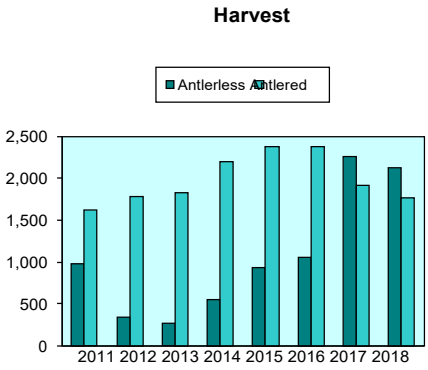
GMU	2008	2009	2010	2011	2012	2013	2014	2015	2016
1			25	29	34				
3	49	20	33	33	33	33			
4	45	18	29	32	16	26	25	21	32
5	34		19	39		27			
6	42	9	26	19	17	22	19	34	35
7	43	9	16	12	9	12	13	30	33
9	46		25			20			

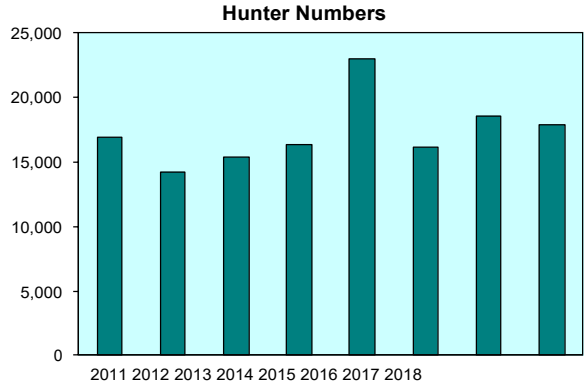


Zone Harvest Statistics

	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	982	346	266	553	930	1,049	2,257	2,127
'A' Tag	197	0	0	25		0	116	187
'B' Tag	712	12	6	0		1	999	906
CH Tag	73	334	260	528	930	1,048	1,142	1,034
Antlered Harvest	1,619	1,778	1,822	2,194	2,372	2,372	1,911	1,767
'A' Tag	571	642	538	752	737	736	718	543
'B' Tag	1,046	1,015	1,177	1,341	1,512	1,530	1,192	1,223
CH Tag	2	121	107	101	123	106	1	1
Hunter Numbers	16,927	14,187	15,343	16,360	22,935	16,169	18,541	17,855
'A' Tag	4,551	4,141	4,361	4,639	6,882	4,169	4,593	4,822
'B' Tag	12,248	8,938	9,580	10,154	13,869	10,044	12,220	11,323
CH Tag	128	1,108	1,402	1,567	2,184	1,956	1,728	1,710
% 6+ Points	23	27	24	21	22	16	19	19

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





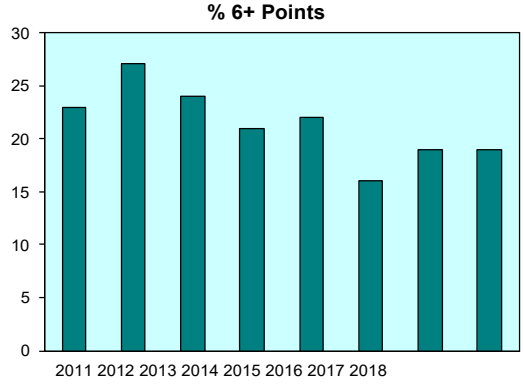


Figure 3. Panhandle Zone Elk Status and Objectives.

Palouse Zone (GMUs 8, 8A, 11A)

Historical Discussion

Historically, elk herds were scattered and numbers were low in this area. Few big game animals were found along Clearwater River by Lewis and Clark in the early 1800s, probably due in part to the dense, unbroken canopy of forest that covered the entire area. Wildfires burned over vast expanses near the beginning of the twentieth century, creating vast brush-fields that provided abundant forage areas for elk. Elk numbers increased following creation of these brush-fields, and elk numbers apparently peaked around 1950. Elk herds declined, however, through the latter part of that decade and the 1960s and 1970s, partially due to: 1) maturation of brush-fields and declines in forage availability; 2) logging and road-building activity that increased vulnerability of elk to hunters under the then more liberal hunting seasons; and 3) loss of some major winter ranges. In response to declines in elk numbers, an either-sex hunting regime was replaced in 1976 with an antlered-only general hunting season. Elk herds then began rebuilding.

Management Objectives

Objectives for Palouse Zone (Figure 4) are to establish a population of 1,125–1,725 cows and 115–415 bulls. The objectives, related to total population level (total elk numbers), were selected to represent a reasonable balance between depredation concerns and the desire to provide a reasonably large elk population. The objective for the number of adult elk represents the maximum number of elk that could be sustained under the circumstances.

The zone presently meets the bull abundance objective with 219 bulls and is just shy of the cow objective with 1,101 cows. The 2016 survey did have some issues due to winter conditions not persisting through survey completion. Elk consequently began moving after abnormally early green-up in mid-February, which resulted in elk moving out of survey GMUs near the end of the survey. This was particularly true in GMU 11A where too few elk were counted to be included in the survey estimates.

Habitat Management and Monitoring

This zone contains portions of the highly productive Palouse and Camas prairies. Dry-land agriculture began in this zone in the 1880s and continued until the 1930s. Large areas of native grassland existed to supply forage for the large numbers of horses and mules required to farm the area. With the development of the tractor and subsequent improvements, farming efforts intensified as equipment became more capable of handling the steep, rolling hills. Currently, virtually all non-forested land is tilled, and only small, isolated patches of perennial vegetation remain, but are regularly burned or treated with herbicides. Elk numbers have only recently increased to levels that have provided significant hunting opportunities. Farmland in GMUs 8 and 8A provides high-quality elk forage, and as populations have grown, so have the number of crop depredation complaints. Farmers recall few elk problems until the last decade or so. Elk currently cause damage to grain, legumes, rapeseed, canola, hay, and valuable specialty crops throughout this zone. Most of the crop damage occurs during summer months. Damage to conifer seedlings caused by elk is a concern where reforestation projects occur on elk winter range. To help address depredation concerns, a green-field hunt was added to the A-tag hunt in 2004. This hunt is an antlerless hunt that runs from 1 August through 15 September within one mile of cultivated fields in Palouse Zone. Additionally, in 2008, an extra antlerless elk hunt was

added (100 X-tags) that was open from 1 January through 31 January to reduce elk numbers in refuge areas; tag numbers were reduced to 55 in 2013 to shift harvest emphasis towards site-specific depredation hunts. In 2010 we added 3 days of cow hunting to existing bull seasons on the B-tag that is open on private lands (excluding corporate timberlands) to put further pressure on elk associated with crop depredations. The 2016 sightability survey indicated that the objective to reduce elk numbers on the Palouse had been met, therefore, the January extra antlerless elk hunt was eliminated and tag numbers were reduced for controlled hunts 8-1 (-50 tags) and 8-2 (-50 tags) in 2017. Current seasons are designed to maintain elk near current levels.

Timber harvest in the corporate timber, private timber, state land, and federal land areas of GMU 8A increased dramatically through the 1980s, 1990s, and early 2000's mostly to salvage dead white pine and respond to increased demand for timber products. This activity created vast acreages of early succession habitat, expanding elk habitat potential. Road construction associated with timber harvest is extensive in some areas. Road closures in some areas have significant potential to benefit elk through improved habitat effectiveness and reduced harvest vulnerability.

Biological Objectives

Elk populations in this zone have increased over the last 30 years due to increased availability of agricultural crops, natural forage, and brush fields (both on summer and winter range). To address increasing depredation problems during the last 10 years, liberal antlerless elk harvest opportunities have been offered and populations have been reduced to desired levels.

Elk productivity in this zone has been high, with calf:cow ratios historically in the mid-40s or higher. This results in a resilient elk population and allows for a liberal season length and harvest. Due to depredation issues we have been trying to reduce elk populations. Population reduction has been successful, and thus reductions in harvest have been implemented to maintain current population levels.

Capture, Radio-mark, and or Telemetry

Capture and radio-marking have not been conducted recently.

Population Surveys and Monitoring

Aerial surveys are conducted on a rotation schedule (every 5 years) and the Palouse zone is current. However, due to lack of winter conditions in most recent years, aerial surveys are behind schedule.

Inter-specific Issues

The zone supports a substantial population of white-tailed deer, while mule deer are uncommon. The zone's moose population has expanded substantially over the past 2 to 3 decades. Competitive interactions may exist among white-tailed deer, elk, and moose. However, the form and extent of those relationships is presently unclear.

Grazing by cattle occurs on almost all of the available pasture ground and poses some competitive concerns for elk, especially during drought years.

Predation Issues

Increasing mountain lion harvest over the last few years likely reflects increased mountain lion numbers in this zone. Black bear numbers have probably remained static. Few wolves persist in this zone.

Winter Feeding and Depredation

Emergency winter feeding has not been conducted recently.

Hunting and Harvest Characteristics

Total harvest in the Palouse Zone in 2018 was estimated at 756 elk based on the mandatory harvest report. This represents a 7% increase in harvest from 2017 (708) and is similar to the previous three-year average of 770. Total hunter numbers were estimated at 3,395 for 2018 compared to 3,556 hunters for 2017. An average of 23% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 23% hunter success rate.

Disease Monitoring

Disease monitoring has not been conducted recently.

Management Discussion

Sightability estimates are needed periodically to monitor progress toward achieving population objectives. In addition, the information is valuable to assess population growth with respect to depredations and antlerless harvest levels. Evaluations of methods to decrease depredation problems in the zone are an ongoing priority/need and Department priority.

Elk

Palouse Zone (GMUs 8, 8A, 11A)

Square Miles =	2,323	3-Year Averages	
% Public Land =	14%	Hunters per square mile =	1.51
Major Land Type =	Agriculture	Harvest per square mile =	0.65
		Success Rate =	22%
		%6+ Points =	23%

Winter Status & Objectives

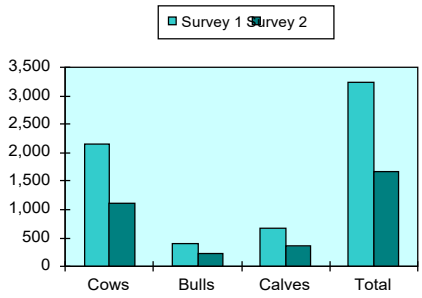
Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2016	1,101	219	97	1,125-1,725	115-415	75-125
Bulls per 100 Cows			20	9		18-24	10-14

Population Surveys

	Survey 1					Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
8	2009	504	125	153	782	2016	256	82	119	457
8A	2009	1,537	241	489	2,267	2016	845	137	234	1,216
11A	2009	112	45	34	191	ND				
Comparable Surveys Total		2,153	411	676	3,240		1,101	219	353	1,673
Per 100 Cows			19	31				20	32	

Note: ND = no survey data available.

Comparable Survey Totals

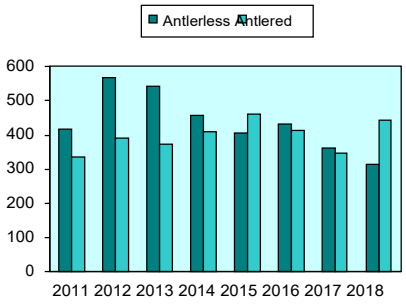


Zone Harvest Statistics

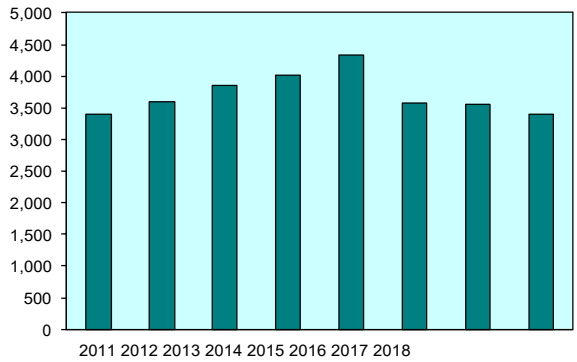
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	417	568	542	457	406	431	361	313
'A' Tag	126	235	214	133	160	211	118	157
'B' Tag	57	62	91	90	56	78	92	55
CH Tag	234	271	237	234	190	142	151	101
Antlered Harvest	336	390	374	411	462	415	347	443
'A' Tag	67	85	63	105	101	86	75	91
'B' Tag	264	305	306	306	361	329	272	352
CH Tag	5	0	5	0	0	0	0	0
Hunter Numbers	3,398	3,593	3,862	4,004	4,327	3,566	3,556	3,395
'A' Tag	947	1,115	1,080	1,127	1,334	1,021	979	1,059
'B' Tag	1,864	1,874	2,172	2,304	2,417	2,060	2,145	1,966
CH Tag	587	604	610	573	576	485	432	370
% 6+ Points	20	25	21	21	21	24	18	27

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

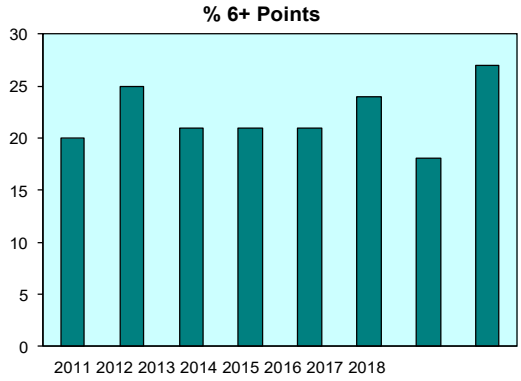


Figure 4. Palouse Zone Elk Status and Objectives.

Lolo Zone (GMUs 10, 12)

Historical Background

Historically, elk herds were scattered and numbers were low in this area. Few big game animals were found along Clearwater River by Lewis and Clark in the early 1800s, probably due in part to the dense, unbroken canopy of forest that covered the entire area. Wildfires burned over vast expanses near the beginning of the twentieth century, creating vast brush-fields that provided abundant forage areas for elk. Elk numbers increased following creation of these brush-fields, and elk numbers apparently peaked around 1950. Elk herds declined into the 1970s, partially due to: 1) maturation of brush-fields and declines in forage availability; 2) logging and road-building activity that increased vulnerability of elk to hunters under the then more liberal hunting seasons; and 3) loss of some major winter ranges. In response to declines in elk numbers, an either-sex hunting regime was replaced in 1976 with an antlered-only general hunting season. Elk herds then began rebuilding.

Management Objectives

Long-term objectives for the Lolo Zone (Figure 5) are to maintain a population of 6,100–9,100 cows and 1,300–1,900 bulls, including 725–1,200 adult bulls. Current population levels are well below objectives with 1,137 cows, 425 bulls, and 286 adult bulls estimated in 2017.

Management of the Lolo Zone elk population and setting appropriate population objectives presents a serious quandary. Existing information suggests that both predation and density dependence (habitat limitations) have been causing low calf production and recruitment.

Habitat Management and Monitoring

Land ownership within this zone is almost entirely publicly-owned forest (USFS). The southern portion of the zone is within the Selway-Bitterroot Wilderness Area. Historically, habitat productivity was high in this zone. However, habitat productivity has decreased following decades of intensive fire suppression. Approximately one-third of the zone has good access for motorized vehicles with medium road densities. The remaining portion has low road densities with good trails contributing to medium-to-low big game vulnerability. Aside from damages to reforestation projects, there are no elk depredation concerns in this zone.

Until the 1930s, wildfires were the primary habitat disturbance mechanism in this zone. Between 1900 and 1934 approximately 70% of the Lochsa River drainage was burned by wildfires. Between 1926 and 1990 over 1,900 km of roads were built in this area to access marketable timber. State Highway 12 along the Lochsa River was completed in 1962 and became the primary travel corridor. In 1964 most of the southern portion of GMU 12 was designated as part of the Selway-Bitterroot Wilderness.

The Clearwater Basin Collaborative (CBC), which is a citizen partnership among state, federal, and private collaborators, has driven research since 2013 evaluating the role of nutritional limitations in elk population declines in the Region. The North Fork Clearwater Study Area in GMU 10, and the Lochsa Study Area in GMU 12, is 2 of 6 study areas selected across the Clearwater Basin in an effort to better understand elk fitness, nutritional status, and habitat use relative to summer forage quantity and quality. Overall, herds in the Basin have relatively low

levels of autumn body fat, body size, and pregnancy rates, however, levels were similar to other herds inhabiting dry forest areas of the inland Northwest (Cook et al. 2017). Preliminary results suggest that elk in GMUs 10 and 12 are in relatively better body condition than other herds in the Basin, however, body size and pregnancy rates were lower than expected in GMU 10 based on autumn body fat levels (Cook et al. 2017). This research is ongoing and additional analyses/data collection is needed to understand what might be limiting elk in the zone.

Biological Objectives

Poor calf recruitment since the late 1980s, winter losses in 1996–1997, and recent population declines in GMUs 10 and 12 have contributed to dramatically decreasing elk herds within this zone. Predation by wolves has been a factor in declines since their reintroduction to Idaho (1995–1996) and reestablishment in the Lolo Zone (early 2000's). Elk numbers in the zone are well below objective for cows, bulls, and adult bulls.

Winter 1996–1997 was marked by severe conditions, including extremely deep snow exceeding 200% of average snow-pack in some areas. These conditions apparently caused higher-than-normal winter mortality, leading to a dramatic decline in the GMU 10 population (-48%). In addition, a survey was conducted in GMU 12 during winter 1996–1997 and those results suggested a 30% decline at that time. This data, in combination with overwhelming anecdotal information, suggests that catastrophic winter losses occurred in GMUs 10 and 12.

Calf productivity and/or recruitment have declined substantially since the late 1980s. Prior to that, winter calf:cow ratios often exceeded 30:100 and occasionally exceeded 40:100. From 1989-1999, ratios dwindled continuously down to levels below 10:100. This level of recruitment is inadequate to sustain natural mortality in the absence of hunting. Between 2002 and 2004, population surveys and composition surveys revealed recruitment levels between 27 and 30 calves:100 cows in GMU 12, and 19–26 calves:100 cows in GMU 10. However, the 2005 age composition surveys showed declines from recent levels. Most notable was the decline in GMU 12 where there were 13.9 calves per 100 cows. The 2010 aerial survey for the Lolo Zone showed a 57% decline from the 2006 survey, from 5,098 elk to 2,178. Calf:cow ratios in 2010 for GMUs 10 and 12 were estimated at 17.4 and 6.9 calves:100 cows respectively. Extreme declines in cow numbers resulted in a high bull:cow ratio of 44 bulls:100 cows in 2010. In 2017, the elk population declined to an estimated 1,893 elk; however, calf:cow ratios for GMUs 10 and 12 increased to 32 and 19 calves:100 cows respectively. The adult bull population declined from 352 in 2010, to 71 in 2017; however, yearling and raghorn bulls increased from 243 in 2010 to 354 in 2017 resulting in 37 bulls:100 cows. Cow numbers declined slightly from 1,358 to 1,137.

Preliminary results from research efforts suggest both nutrition and predation may be potential causes of low calf recruitment levels. Since 2011, calf survival rates have been increasing, and recently peaked at 88% (n = 19) in 2014. This increase may be due to several factors including mild winter conditions and reductions in wolf numbers. Additional work conducted in an experimental framework has also shown wolves to be a major factor in some years (winters with deep snow–and likely prior to wolf removal efforts).

To address low recruitment levels, declining bull numbers, and 1996–1997 winter losses, the Department capped B-tag numbers at 1,600 and closed cow elk controlled hunts beginning with

the 1998 hunting season. This B-tag cap level represented a 60–65% reduction in any-bull rifle hunting opportunity. In 2010 the B-tag quota was further reduced to 1,088 and A-tag quota of 404 imposed. However, with declining elk numbers, hunter participation rates are declining and tags are not selling out. Low recruitment and low adult cow survival remain a concern in this zone. Without long-term changes in demographic rates, objectives in the zone will not be achievable in the foreseeable future.

Capture, Radio-mark, and or Telemetry

Capture and radio marking of elk has not been conducted during this reporting period.

Population Surveys and Monitoring

Aerial population surveys were conducted in 2017 and each zone is on a 5 year rotation schedule. Due to lack of winter conditions in most recent years, aerial surveys are behind schedule, however, the Lolo zone is up to date.

Inter-specific Issues

Both GMUs support small white-tailed deer populations, few mule deer, and moderate-density moose populations. Moose populations increased moderately over the past 20 years, but more recently growth may have stalled. Grazing by cattle occurs to a limited extent in the northwestern corner of GMU 12 on a U.S. Forest Service (USFS) allotment.

Predation Issues

Research investigating cause-specific mortality in GMU 10 reported that the primary proximate cause of neonate mortality was from black bears and mountain lions, and subsequent reductions in bear densities improved neonate survival (White et al. 2010). In most of the Clearwater Region, mountain lion harvest levels have exhibited a slight increasing trend over the last decade; however, anecdotal data suggests that lion populations have remained stable in the Lolo Zone since the mid-2000s, shortly after declining from peak levels in the late 1990s. Black bear harvest remained somewhat stable through 1998, averaging between 100 and 150 bears per year, until 1998, when greatly liberalized seasons led to dramatic increases in harvest that has ranged from 215 to 335 bears harvested per year ever since. However, black bear population performance remains well above plan objectives. Wolf packs have been well-established throughout the zone.

Research in the zone indicates that wolves have had impacts on elk demographics and wolf predation has been the leading cause of mortality of adult cows and calves ≥ 6 months during some years, particularly heavy snow years. The Department has conducted numerous annual wolf removal efforts beginning in 2010, in addition to aggressive wolf harvest seasons intended to reduce impacts of predation on this elk population. Improved survival in recent years could be due to a combination of mild snow conditions and wolf removal efforts.

To gain a better understanding of cause-specific calf survival and management implications across the State, the Department began collaring calves in GMUs statewide in 2015. Within the Clearwater Region, GMUs 10A and 15 were included in this statewide monitoring effort. From 2015–2016, there were 6 calf mortalities in GMU 10A (43 total collared, 86% overall survival),

and the main cause of death was wolf predation (33%) and unknown predation (33%); followed by mountain lion predation (17%) and malnutrition (17 %). From 2017–2019, there were 50 calf mortalities in GMU 10A (83 total collared, 40% overall survival) with main cause of death contributed to mountain lion (22%) and wolf predation (20%).Unknown, unknown predation, malnutrition, and accident made up 18%, 16%, 14%, and 4% mortality, respectively. Only 5 calf mortalities occurred in GMU 15 from 2015–2018 (58 total collared, 91% overall survival), including 3 from unknown predation, 1 from wolf predation, and 1 from an automobile accident. Statewide calf survival in 2015, 2016, 2017, 2018, and 2019 was 82%, 76%, 52%, 68%, and 69%, respectively. Of those calf mortalities in 2015, 72.5% were due to lion predation, 22.5% wolf, and 5.0% accident. Lion predation again was the dominant cause of death in 2016 (35%) followed by 18% wolf predation, 16% malnutrition, 11% unknown predation, 6% accident, and 14% other factors. In 2017, statewide calf mortalities were 40% malnutrition, 29% lion predation, 9% unknown, 7% wolf, 6% unknown predation, and 9% other factors. During 2018, statewide calf mortalities were 34% lion predation, 18% unknown predation, 13% wolf predation, 7% malnutrition, and 23% related to other factors including uncertain (n = 15), capture mortality (n = 3), and coyote predation (n = 1). In 2019, lion predation accounted for 40% of statewide calf mortality, while wolf predation and malnutrition comprised 19% and 13%, respectively. Unknown, unknown predation, uncertain, and accidents each made up less than 10% of calf mortality statewide.

Winter Feeding and Depredation

Emergency winter feeding has not been conducted recently.

Hunting and Harvest Characteristics

Total harvest in the Lolo Zone in 2018 was estimated at 146 elk based on the mandatory harvest report. This represents a 1% increase in harvest from 2017 (144) and is similar to the previous three-year average of 145. Total hunter numbers were estimated at 869 for 2018 compared to 716 hunters for 2017. An average of 30% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 19% hunter success rate.

Disease Monitoring

Disease monitoring has not been conducted recently.

Management Discussion

The level of the Lolo Zone B-tag cap, and any future changes in the cap, are dependent upon cow survival and recruitment levels. In addition to data collected as part of ongoing elk survival and nutrition research, complete sightability surveys will be conducted frequently to evaluate population performance.

Elk

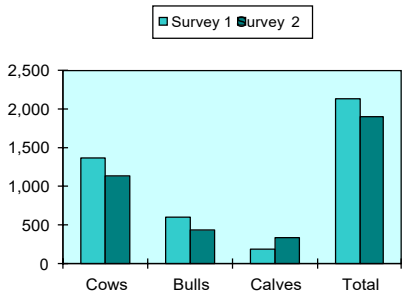
Lolo Zone (GMUs 10, 12)

Square Miles =	2,373	3-Year Averages	
% Public Land =	97%	Hunters per square mile =	0.32
Major Land Type =	Forest	Harvest per square mile =	0.06
		Success Rate =	19%
		%6+ Points =	30%

Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2017	1,137	425	286	6,100-9,100	1,300-1,900	725-1,200
Bulls per 100 Cows			37	25		18-24	10-14

Comparable Survey Totals



Population Surveys

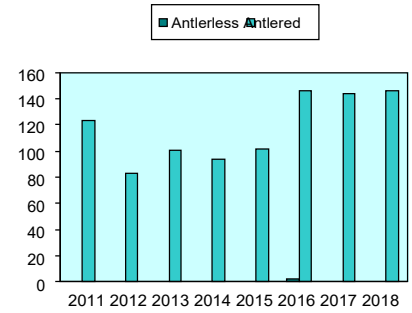
	Survey 1					Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
10	2010	824	461	144	1,429	2017	866	266	280	1,412
12	2010	534	133	38	705	2017	271	159	51	481
Comparable Surveys Total		1,358	594	182	2,134		1,137	425	331	1,893
Per 100 Cows			44	13				37	29	

Zone Harvest Statistics

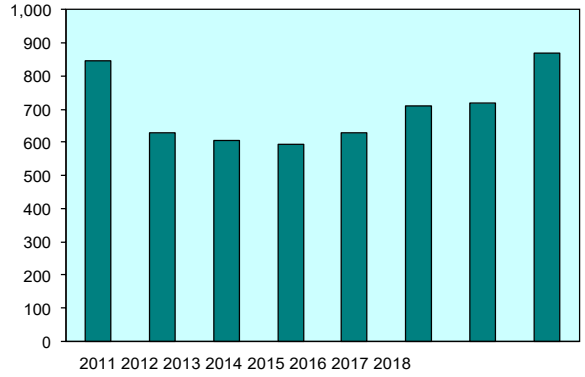
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	0	0	0	0	0	2	0	0
'A' Tag	0	0	0	0	0	2	0	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	0	0	0	0	0	0	0	0
Antlered Harvest	123	83	101	94	102	146	144	146
'A' Tag	27	9	16	26	19	34	45	58
'B' Tag	96	74	85	68	83	112	99	88
CH Tag	0	0	0	0	0	0	0	0
Hunter Numbers	844	629	607	594	628	710	716	869
'A' Tag	266	156	123	140	124	148	157	293
'B' Tag	578	473	484	454	504	562	559	576
CH Tag	0	0	0	0	0	0	0	0
% 6+ Points	52	49	39	41	29	31	24	34

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

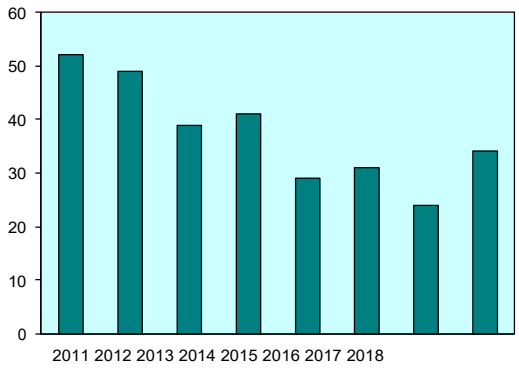


Figure 5. Lolo Zone Elk Status and Objectives.

Dworshak Zone (GMU 10A)

Historical Background

Historically, elk herds were scattered and numbers were low in this area. Few big game animals were found along Clearwater River by Lewis and Clark in the early 1800s, probably due in part to the dense, unbroken canopy of forest that covered the entire area. Wildfires burned over vast expanses near the beginning of the twentieth century, creating vast brush-fields that provided abundant forage areas for elk. Elk numbers increased following creation of these brush-fields, and elk numbers apparently peaked around 1950. Elk herds declined into the 1970s, partially due to: 1) maturation of brush-fields and declines in forage availability; 2) logging and road-building activity that increased vulnerability of elk to hunters under the then more liberal hunting seasons; and 3) loss of some major winter ranges due to flooding with the filling of Dworshak Reservoir. In response to declines in elk numbers, an either-sex hunting regime was replaced in 1976 with an antlered-only general hunting season. Elk herds then began rebuilding.

Management Objectives

Objectives for the Dworshak Zone (Figure 6) are to establish a population of 2,900–4,300 cows and 600–900 bulls, including 350–500 adult bulls. Based on 2011 sightability survey results, the cow objective is being met (4,280 cows estimated), while the bull (315 estimated) and adult bull (105 estimated) objectives are not. Elk populations in the Dworshak Zone remain stable, despite the relatively recent addition of wolves to the predator suite in this zone and relatively high elk harvest. This elk population remains productive and offers considerable opportunity for elk hunters.

Management direction for the zone is to maintain the elk population within objectives, while recognizing that high bull elk vulnerability in the zone impedes progress towards bull objectives and a general acceptance by hunters of relatively high hunter densities and moderate bull quality.

Habitat Management and Monitoring

Dworshak Zone consists of GMU 10A, which is approximately 75% timberland and 25% open or agricultural lands and is bisected by canyons leading to the Clearwater River. The first wave of timber harvest in this zone occurred during the early 1900s and consisted mostly of removing the most valuable timber species and largest trees. During the 1970s, timber harvest increased fairly dramatically, and new roads provided access to previously inaccessible areas. In 1971, Dworshak Reservoir flooded approximately 45 miles of the North Fork Clearwater River corridor with slack water and permanently removed many thousands of acres of prime, low-elevation winter range for big game. During the early 1970s, only a few hundred elk were observed wintering along the river under the predominantly old-growth cedar hemlock forest. The timberland is owned predominantly by Potlatch Corporation, Idaho Department of Lands (IDL), and USFS. Access is very good throughout the zone and timber harvest occurs on most available timber ground. High open and closed road densities contribute to high elk vulnerability and low habitat effectiveness. During the 1980s, 1990s, and through present times, timber harvest has occurred on almost all available state and private land as demand for timber and management of these lands intensified. Despite the reservoir flooding parts of the historical winter range, extensive logging along the river corridor improved the existing winter range in

this GMU. South-aspect forests were cleared to provide timber products and inadvertently provided quality winter range.

The Clearwater Basin Collaborative (CBC), which is a citizen partnership among state, federal, and private collaborators, has driven research since 2013 evaluating the role of nutritional limitations in elk population declines in the Region. The Dworshak Study Area in GMU 10A is 1 of 6 study areas selected across the Clearwater Basin in an effort to better understand elk fitness, nutritional status, and habitat use relative to summer forage quantity and quality. Overall, herds in the Basin have relatively low levels of autumn body fat, body size, and pregnancy rates, however, levels were similar to other herds inhabiting dry forest areas of the inland Northwest (Cook et al. 2017). Preliminary results suggest that elk in the Dworshak Zone have relatively high body fat levels compared to other study areas, surpassed only by elk in the Lolo Zone (Cook et al. 2017). Forage models also predicted higher forage quality in these zones than other zones in the Clearwater Region.

Depredations have increased on agricultural land within the past 10 years in this zone due to increases in both deer and elk populations and changes in land ownership that reduced access for hunting opportunities. Elk cause damage to grain, legumes, and hay crops within the south-central portion of this zone during summer months. Occasional damage to stored hay, silage, and winter wheat occurs during winters with heavy snow accumulation. Damage to conifer seedlings by elk is a concern in the remaining portions of this zone where reforestation projects overlap with elk winter range. Controlled antlerless elk seasons have been successful in reducing the overall level of damage in this zone.

Biological Objectives

Historically, GMU 10A has supported a productive elk population. From 1992–1996, recruitment averaged 34 calves:100 cows. From 1997–1999, recruitment dropped to an average of 19 calves:100 cows. However, the 2001 and 2007 sightability surveys revealed increases in recruitment at 30 calves:100 cows and 26 calves:100 cows, respectively. The most recent survey in 2011 showed an increase in cow numbers from 2007 (3,235–4,280) and no change in calf numbers, resulting in a decrease in recruitment at 20 calves:100 cows in 2011, down from 26 calves:100 cows in 2007. Bull numbers remain below objective and showed further decline in 2011. Concerns over low recruitment and low bull numbers might precipitate future hunting season changes.

Capture, Radio-mark and or Telemetry

Beginning in winter of 2014 Dworshak zone was prioritized as part of a statewide effort to better understand survival and cause-specific mortality. Each winter approximately 30 calves are collared and monitored. This data is helping to support the development of an integrated population model to better understand and analyze populations in this zone and others. This effort will continue into the 2019 winter.

Population Surveys and Monitoring

Aerial surveys are conducted on a rotation schedule (every 5 years) and the Dworshak zone is due to be flown as soon as winter conditions allow. Due to lack of winter conditions in most

recent years, aerial surveys are behind schedule. Radio collared cows and calves are monitored for cause-specific mortality and survival.

Inter-specific Issues

GMU 10A supports a substantial white-tailed deer population, few mule deer, and a moderate moose population. The white-tailed deer population has increased dramatically over the past 20 years. Significant competitive interactions between white-tailed deer and elk may exist. However, the form and extent of those relationships is presently unclear.

Significant livestock grazing on rangeland in the southeastern portion of the zone impacts elk habitat potential. Most of that grazing occurs on habitats used exclusively during winter months. Additionally, range allotments are present on summer and winter habitat on USFS, IDL, and Potlatch Corporation lands elsewhere in the zone.

Predation Issues

Predator numbers, mountain lions in particular, increased to high levels 2 decades ago. Lion harvest in the zone increased dramatically from a range of 4 to 20 harvested annually in the late 1980s to a peak of 87 lions harvested in 1997. Elk harvest subsequently declined over this same timeframe. Anecdotal observations suggest this trend in harvest was related to a similar trend in mountain lion populations. Since 1997 lion harvest declined to a low of 16 lions harvested in 2007; however, harvest has been trending upwards in recent years with a 2016–2018 average of 48 lions harvested per year. Black bear harvest has increased slowly and recently stabilized, however, harvest levels remain below the 2000 –2010 bear management plan objective of heavy harvest based on % males ≥ 5 years old. Anecdotal increasing trends in mountain lion and bear populations might be adversely affecting elk population performance, but there is currently inadequate information to objectively assess those potential impacts. Wolves have been established within Dworshak Zone since the early 2000's. Currently, at least 6 packs inhabit the Dworshak Zone for the majority of the year and 6 additional packs inhabit the zone periodically (i.e., these packs spend time in other management zones).

The Dworshak Zone was prioritized as part of a statewide effort to better understand survival and cause-specific mortality. Cause-specific mortality was evaluated in 2015, 2016, 2017, 2018, and 2019. Calf survival from 1 January to 31 May over these years was 83%, 88%, 43%, 43%, and 33% respectively. Cumulative cause of death over this time period included lion predation (18 calves), wolf predation (15 calves), unknown predation (5 calves), malnutrition (8 calves), unknown (8 calves), and accident (2 calves). Yearling survival was 100% in 2016 and 2017 and 86% in 2018 from 1 January to 31 May (no yearlings were collared in 2015). In 2019, yearling survival was 100% during this time period. From 1 June to 31 December, yearling survival was 75% in 2016, 83% in 2017, 89% in 2018, and currently 100% in 2019. Cause of death was attributed to hunter harvest (6 yearlings), unknown predation (2 yearlings), unknown (2 yearling), and mountain lion predation (2 yearling). Survival in 2016 of adult cows (5 collared) and bulls (1 collared) was 80% and 100% respectively, with 1 cow dying of unknown cause. Survival of 2018 adult cows (14 collared) and bulls (2 collared) was 86%% and 50% respectively. In 2018, 1 bull and 1 cow were harvested with another cow mortality attributed to mountain lion predation. Adult elk survival is 100% thus far for 2019. Statewide calf survival in 2015, 2016, 2017, 2018, and 2019 was 82%, 76%, 52%, 68%, and 69%, respectively. Of those

calf mortalities in 2015, 72.5% were due to lion predation, 22.5% wolf, and 5.0% accident. Lion predation again was the dominant cause of death in 2016 (35%) followed by 18% wolf predation, 16% malnutrition, 11% unknown predation, 6% accident, and 14% other factors. In 2017, statewide calf mortalities were 40% malnutrition, 29% lion predation, 9% unknown, 7% wolf, 6% unknown predation, and 9% other factors. During 2018, statewide calf mortalities were 34% lion predation, 18% unknown predation, 13% wolf predation, 7% malnutrition, and 23% related to other factors including uncertain (n = 15), capture mortality (n = 3), and coyote predation (n = 1). In 2019, lion predation accounted for 40% of statewide calf mortality, while wolf predation and malnutrition comprised 19% and 13%, respectively. Unknown, unknown predation, and accidents each made up less than 10% of calf mortality statewide.

Winter Feeding and Depredation

Emergency winter feeding has not been conducted recently.

Hunting and Harvest Characteristics

Total harvest in the Dworshak Zone in 2018 was estimated at 741 elk based on the mandatory harvest report. This represents a 41% increase in harvest from 2017 (527) and is above the previous three-year average of 652. Total hunter numbers were estimated at 3,297 for 2018 compared to 3,149 hunters for 2017. An average of 20% of the bulls harvested in this GMU over the past 3 years (2016–2018) has been 6-point or larger with a 20% hunter success rate.

Disease Monitoring

Captured and collared elk are tested for the following: Bluetongue (BT), Bovine Respiratory Syncytial Virus (BRSV), Bovine Viral Diarrhea Virus (BVD), Infectious Bovine Rhinotracheitis virus (IBR), Epizootic Hemorrhagic Disease virus (EHD). No other disease testing has been conducted recently.

Management Discussion

Sightability surveys will be needed periodically to evaluate population performance relative to plan objectives. Composition surveys may be conducted to evaluate potential changes in recruitment. Calf survival monitoring will continue to be a priority in this zone for at least another year.

Elk

Dworshak Zone (GMU 10A)

Square Miles =	1,555	3-Year Averages	
% Public Land =	49%	Hunters per square mile =	2.03
Major Land Type =	Forest	Harvest per square mile =	0.67
		Success Rate =	20%
		%6+ Points =	20%

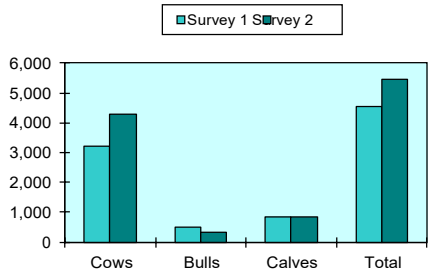
Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2011	4,280	315	105	2,900 - 4,300	600 - 900	350 - 500
Bulls per 100 Cows			7	2		18-24	10-14

Population Surveys

Survey 1						Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
10A	2007	3,236	477	848	4,561	2011	4,280	315	850	5,445
Comparable Surveys Total		3,236	477	848	4,561		4,280	315	850	5,445
Per 100 Cows			15	26				7	20	

Comparable Survey Totals

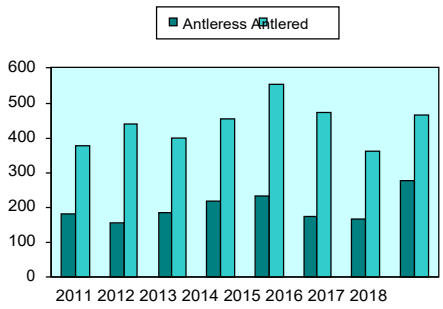


Zone Harvest Statistics

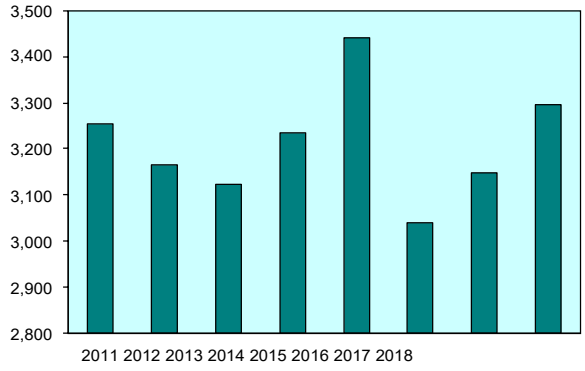
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	182	154	186	216	231	175	167	275
'A' Tag	127	105	124	166	178	138	126	221
'B' Tag	6	1	6	5	7	6	0	0
CH Tag	49	48	56	45	46	31	41	54
Antlered Harvest	377	438	399	453	552	471	360	466
'A' Tag	85	96	91	103	110	137	100	139
'B' Tag	292	342	307	350	442	334	260	327
CH Tag	0	0	1	0	0	0	0	0
Hunter Numbers	3,255	3,164	3,123	3,236	3,440	3,040	3,149	3,297
'A' Tag	1,058	997	1,010	1,037	1,211	1,095	1,041	1,159
'B' Tag	2,123	2,092	2,028	2,129	2,161	1,879	2,039	2,062
CH Tag	74	75	85	70	68	66	69	76
% 6+ Points	19	16	16	14	18	25	12	20

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

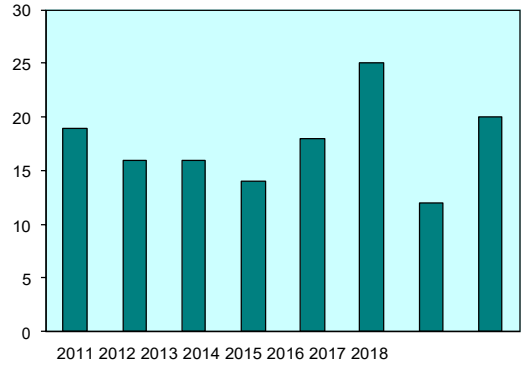


Figure 6. Dworshak Zone Elk Status and Objectives.

Hells Canyon Zone (GMUs 11, 13, 18)

Historical Background

Historically, elk herds were scattered and numbers were low in this area. Few big game animals were found along Clearwater River by Lewis and Clark in the early 1800s, probably due in part to the dense, unbroken canopy of forest that covered the entire area. Wildfires burned over vast expanses near the beginning of the twentieth century, creating vast brush-fields that provided abundant forage areas for elk. Elk production in areas adjacent to this GMU increased around the turn of the century, and elk repopulated this zone by the 1960s. Elk herds declined into the 1970s, partially due to: 1) maturation of brush-fields and declines in forage availability; 2) logging and road-building activity that increased vulnerability of elk to hunters under the then more liberal hunting seasons; and 3) loss of some major winter ranges. In response to declines in elk numbers, an either-sex hunting regime was replaced in 1976 with an antlered-only general hunting season. Elk herds then began rebuilding.

Management Objectives

Objectives for the Hells Canyon Zone (Figure 7) are to establish a population of 2,000–2,900 cows and 420–610 bulls, including 240–348 adult bulls. Currently all population objectives are being met or exceeded for the Hells Canyon Zone with an estimated 2,556 cows, 799 bulls, and 600 adult bulls. Tag levels were increased in 2009 in all GMUs to slow or cap growth. Antlerless seasons were restructured in GMUs 11, 13, and 18 in 2013 to increase cow harvest in response to low calf recruitment rates. Bull tags were reduced in 2013 in GMU 11 in response to a decrease in adult bulls estimated during the 2013 survey.

Habitat Management and Monitoring

Habitat productivity varies widely throughout the zone from steep, dry, river-canyon grasslands having low annual precipitation to higher elevation forests with good habitat productivity and greater precipitation. Late succession forest cover types have become fragmented within the zone. Many grassland cover types have been invaded by various weeds and non-native grasses, including cheatgrass and yellow star thistle. Road density is moderate, and access is restricted in many areas. This results in medium to low vulnerability of big game to hunters, however, increased permit numbers has likely increased vulnerability of cow elk.

Historically, sheep and cattle ranchers and miners homesteaded the canyon lands in this zone, while prairie land was settled by farmers. Around the turn of the century, northern GMU 11 was under intensive use for dry-land agriculture and fruit orchards. Many resort cabins were built near and around the town of Waha. Later, many cabins were built along the mail stage route from Lewiston to Cottonwood via Soldiers Meadows and Forest. A mill was built in Winchester, along with numerous smaller mills on Craig Mountain, and the forested portion of Craig Mountain was extensively logged. The forests were frequently high-graded, and the existing forests still show the scars. In addition, past improper grazing practices severely degraded many meadow areas and allowed invasion of noxious weed species on dryer sites. The elk population increased dramatically in the zone since 1991 (200+% increase) and recent surveys have estimated declining recruitment, suggesting density dependent constraints on further population growth.

This zone contains large tracts of both private and publicly-owned land. GMU 11 is mostly private land except for Craig Mountain Wildlife Management Area (CMWMA) along the Snake and Salmon rivers. The CMWMA consists of 2 major management units: the Billy Creek area (16,123 acres), which was obtained between 1971 and 1983; and the Peter T. Johnson Mitigation Area (59,991 acres), which was acquired in 1995 as partial mitigation for Dworshak Reservoir. GMU 13 has been mostly under private ownership since settlement and is managed mostly for agriculture and livestock grazing and has very limited public access opportunity. Historically, sheepherders ran their flocks in the canyons of GMU 18, and some logging occurred in the forested areas of this GMU. GMU 18 is two-thirds public land with the remaining in private ownership located at lower elevations along Salmon River. The majority of Hells Canyon Wilderness Area, which was designated as such in 1975, is in GMU 18.

Depredations have increased during the past 10 years in this zone due to increases in white-tailed deer and elk populations. Elk cause damage to grain, legumes, hay, and rangeland forage. Cultivated crops are the primary concern in the north (GMU 11), while livestock forage is the primary concern in the remaining portion of this zone (GMUs 13 and 18). Controlled antlerless elk seasons have had limited success in reducing the overall damage despite dramatic increases in permit levels.

Biological Objectives

Elk hunting in this zone is offered only on a controlled-hunt basis. Across the zone, sightability survey data indicate that cow and bull elk are down, with continued declining calf recruitment. Bull:cow ratios during the 2013 and 2019 surveys were 29 and 30, respectively. Calf:cow ratios remained low, from 21 calves:100 cows in 2013 to 22 calves:100 cows in 2019. Even more alarming was the decline in calves in GMU 11, with only 17 calves:100 cows estimated in 2013, and no further improvement with only 20 calves:100 cows estimated in 2019.

Since 1991, elk populations have grown rapidly in the Hells Canyon Zone. Cow populations have increased from 865 in 1991 to 3,633 in 2013. Bull elk populations have also shown tremendous growth, increasing from 299 bulls in 1991 to 1,059 bulls in 2013. However, during the 2013 survey, there were 184 fewer calves estimated (despite the increase in cow numbers) and calf recruitment decreased to 21 calves:100 cows. In order to address a potential density-dependence issue, an additional 150 cow tags were added (total 525) to the 2013 hunt and bull tags were reduced from 151 to 80. In addition, a collaborative research project commenced in November of 2013 to investigate elk nutrition and pregnancy rates. Preliminary results from the CMWMA in GMU 11 showed that 10 of 20 cows captured (18 collars deployed including 1 yearling) were lactating while average body fat was 5.3% (range of 2.7−7.4%) suggesting cows were in poor body condition coming onto winter range and potentially a nutritional deficiency on summer range. Average body mass for these same animals (based on girth) was 214 kg (range of 208−226 kg). Estimates derived from CMWMA are equivalent to the lowest levels observed in elk sampled during a similar study throughout the Pacific Northwest (Cook et al. 2013). Despite low body fat levels, elk at CMWMA had high pregnancy rates, which could be due to abundant autumn green-up supporting higher pregnancy rates (Cook et al. 2017). The 2019 sightability survey indicated further declines in cow:calf ratios despite an effort to reduce populations. Continuation of this research and subsequent population surveys will help direct management to maintain a productive elk herd in the Hells Canyon Zone.

Capture, Radio-mark, and or Telemetry

Capture and radio marking of elk has not been conducted during this reporting period.

Population Surveys and Monitoring

An aerial survey was flown during February 2019. A total population estimate of 3,892 elk were observed which included; 2,556 cows, 799 bulls and 577 calves. This resulted in a bull:cow:calf ratio of 31:100:23.

Inter-specific Issues

Grazing by cattle is gradually decreasing in the public land portions of this zone due to reductions in USFS and Bureau of Land Management (BLM) allotments, along with land ownership shifting from private to public. Mule deer populations based on recent sightability surveys are reasonably high compared to survey results from the mid to late 1980s, however, the extent of any competitive interactions with elk are unknown.

Predation Issues

Predation is not believed to be a driving factor of elk populations within the Hells Canyon Zone. Mountain lion harvest had previously been declining since 2008 when 28 lions were harvested, although recently harvest has been increasing, peaking at 31 lions in 2013. Across the Clearwater Region, GMUs 11, 13, and 18 provide the lowest quality bear habitat and likely has the lowest bear densities due to its hot and arid climate. Yet, black bear harvest has continued to increase slightly in GMUs 11, 13, and 18 when compared to the previous 3-year average. There has been only 1 documented wolf pack in the southern end of GMU 18 since the early 2000's, and presence is likely seasonal.

Winter Feeding and Depredation

Emergency winter feeding has not been conducted recently.

Hunting and Harvest Characteristics

Total harvest in the Hells Canyon Zone in 2018 was estimated at 576 elk based on the mandatory harvest report. This represents a 7% decrease in harvest from 2017 (622) and is similar to the previous three-year average of 648. Total hunter numbers were estimated at 1,801 for 2018 compared to 1,863 hunters for 2017. An average of 60% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 34% hunter success rate.

Disease Monitoring

Disease monitoring has not been conducted recently.

Management Discussion

Sightability surveys will be required periodically across the zone to evaluate population performance relative to plan objectives. Continued monitoring through the Clearwater Basin

Collaborative elk nutrition study will help to direct management of the zone in addition to sightability survey population estimates.

Elk

Hells Canyon Zone (GMUs 11, 13, 18)

Square Miles =	1,389	3-Year Averages	
% Public Land =	94%	Hunters per square mile =	1.33
Major Land Type =	Forest	Harvest per square mile =	0.91
	Rangeland	Success Rate =	34%
		%6+ Points =	60%

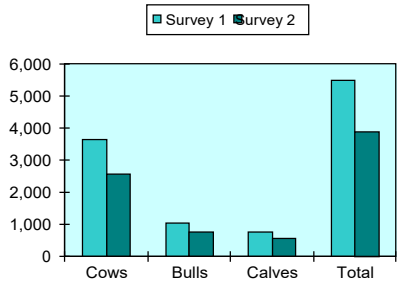
Winter Status & Objectives

Zone Total	Year	Current Status Cows	Bulls	Adult Bulls	Objective Cows	Bulls	Adult Bulls
	2019	2,556	799	600	2,000-2,900	420-610	240--348
Bulls per 100 Cows			31	23		25-29	14-18

Population Surveys

		Survey 1					Survey 2			
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
11	2013	1,012	222	176	1,410	2019	309	94	62	465
13	2013	823	265	225	1,313	2019	1,190	404	243	1,837
18	2013	1,798	572	380	2,750	2019	1,057	281	252	1,590
Comparable Surveys Total		3,633	1,059	781	5,473		2,556	779	557	3,892
Per 100 Cows			29	21				30	22	

Comparable Survey Totals

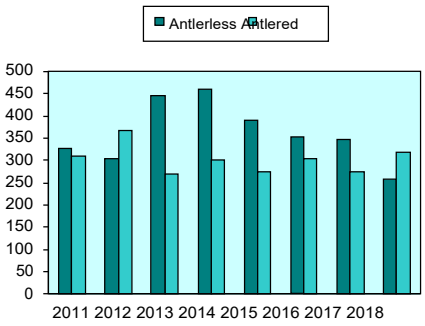


Zone Harvest Statistics

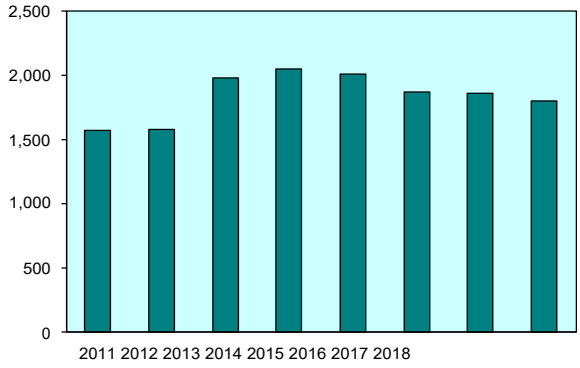
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	328	304	445	460	391	352	348	259
'A' Tag	0	0	0	0	0	0	0	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	328	304	445	460	391	352	348	259
Antlered Harvest	309	366	270	301	275	305	274	317
'A' Tag	0	0	0	0	0	0	0	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	309	366	270	301	275	305	274	317
Hunter Numbers	1,572	1,580	1,979	2,047	2,006	1,866	1,863	1,801
'A' Tag	0	0	0	0	0	0	0	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	1,572	1,580	1,979	2,047	2,006	1,866	1,863	1,801
% 6+ Points	39	42	47	56	56	55	67	59

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

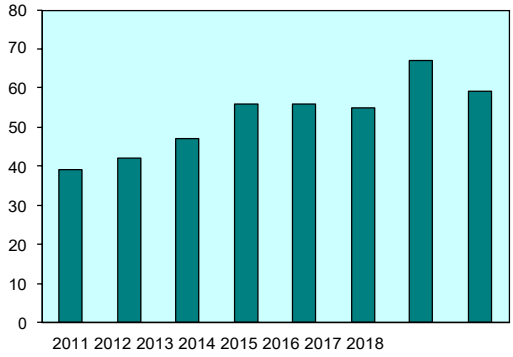


Figure 7. Hells Canyon Zone Elk Status and Objectives.

Elk City Zone (GMUs 14, 15, 16)

Historical Background

Historically, elk herds were scattered and numbers were low in this area. Few big game animals were found along Clearwater River by Lewis and Clark in the early 1800s, probably due in part to the dense, unbroken canopy of forest that covered the entire area. Wildfires burned over vast expanses near the beginning of the twentieth century, creating vast brush-fields that provided abundant forage areas for elk. Elk numbers increased following creation of these brush-fields, and elk numbers apparently peaked around 1950. Elk herds declined into the 1970s, partially due to: 1) maturation of brush-fields and declines in forage availability; 2) logging and road-building activity that increased vulnerability of elk to hunters under the then more liberal hunting seasons; and 3) loss of some major winter ranges. In response to declines in elk numbers, an either-sex hunting regime was replaced in 1976 with an antlered-only general hunting season. Elk herds then began rebuilding.

Management Objectives

Objectives for the Elk City Zone (Figure 8) are to maintain a population of 3,150–4,650 cows and 675–1,000 bulls, including 350–575 adult bulls. In the most recent aerial survey (2015) this zone was below objectives for cows (2,900 estimated), total bulls (283 estimated), and adult bulls (151 estimated). This survey should not have been conducted due to lack of snow, consequently, elk were not on winter range and these survey results are not representative of actual elk numbers. The 2008 survey, which did have good survey conditions, estimated 4,264 cows, 863 bulls, and 218 adult bulls. Current perceptions are that elk have declined in GMUs 15 and 16 but are up in GMU 14. The current cow harvest management strategy allowed that segment of the population to achieve its objective in 2008. B-tag sales were capped beginning with the 2002 hunting season to allow the bull segment of the population to reach objectives in 2008.

Habitat Management and Monitoring

The prairie regions of this zone were converted to agriculture and ranching by early settlers. In 1862, gold was discovered near the current location of Elk City in GMU 15. After the readily available gold was depleted, miners turned to dredging activities where rivers ran through meadows. Crooked, American, and Red rivers were channelized and rerouted several times during the extraction processes, which continued commercially until the 1950s. Logging began as part of mining activities to supply wood for the mines. In the 1940s, logging activities became commercial and resulted in an extensive network of roads throughout a large portion of this zone. In 1964, with the passage of the Wilderness Act, a small portion of GMU 16 was designated as a part of the Selway-Bitterroot Wilderness. In 1978, portions of GMUs 14 and 15 were included in the Gospel Hump Wilderness.

Land ownership in this zone is approximately 80% public with the remaining 20% private. The privately-owned portions are at lower elevations along the Clearwater and Salmon rivers. Approximately 8% of this zone is wilderness. Habitat productivity in GMU 14 is relatively high in comparison to most other Clearwater Region big game GMUs, but productivity in GMUs 15 and 16 is likely declining due to forest succession and fire suppression. Many forested areas in GMUs 15 and 16 have become overgrown with lodgepole pine and fir due to fire suppression

during the past 40+ years. Both open and closed road densities are high within the zone, contributing to significant big game vulnerability during hunting seasons along with relatively high illegal harvest throughout the year. Noxious weeds, especially yellow star thistle and spotted knapweed, have increased within the past 15 years and in some areas are out-competing grasses and forbs on important elk habitats.

The Clearwater Basin Collaborative (CBC), which is a citizen partnership among state, federal, and private collaborators, has driven research since 2013 evaluating the role of nutritional limitations in elk population declines in the Region. The South Fork Clearwater Study Area in GMU 15, and Riggins Study Area in GMU 14, are 2 of 6 study areas selected across the Clearwater Basin in an effort to better understand elk fitness, nutritional status, and habitat use relative to summer forage quantity and quality. Overall, herds in the Basin have relatively low levels of autumn body fat, body size, and pregnancy rates, however, levels were similar to other herds inhabiting dry forest areas of the inland Northwest (Cook et al. 2017). Preliminary results suggest that elk in the South Fork herd have lower body fat levels than the Riggins herd, in addition to lower pregnancy rates, which indicates potential summer nutritional limitations (Cook et al. 2017).

Depredations have increased within the past 10 years in this zone due to increases in both deer and elk populations and changes in land ownership that reduced access for hunting opportunities. Livestock operators are concerned with elk use of pasture and rangeland forage during spring months prior to release of livestock on these grounds. Some damage to grain crops occurs during summer. Several past fencing projects have helped to reduce concerns of elk damaging stored hay during winters with heavy snow accumulation.

Biological Objectives

From 1987 to 2008, cow elk numbers in the zone were stable to increasing and bull elk were increasing. Bull:cow ratios ranged between 12.9 and 13.6 on the 2000 surveys. In 2002, a cap of 1,790 B-tag hunters was initiated. The most recent surveys suggest declines, particularly in GMU's 15 and 16; consequently, reliable recent data of elk numbers is lacking.

Historically, calf recruitment in GMUs 14 and 15 was high, averaging 38 calves:100 cows from 1987–1993. However, the 2000 survey revealed recruitment of 25 calves:100 cows, suggesting that a decline in recruitment occurred, similar to surrounding areas. This trend in low calf recruitment continued through 2015, when 21 calves:100 cows were estimated in GMU 15 during the 2015 survey. Chronic low recruitment is a concern in GMU 16, which averaged 19 calves:100 cows from 1990 –2000 and fell to 17 calves in 2008 and 2015. Cow numbers in GMU 14 declined slightly from 2,402 in 2008 to 2,309 in 2015, however, recruitment increased from 24 to 29 calves:100 cows over the same time period. In 2012, a large forest fire in GMU 14 that improved forage quality may have wintered elk that traditionally wintered in GMU 15, potentially depressing calf recruitment estimates in GMU 15.

Capture, Radio-mark, and or Telemetry

Beginning in winter of 2014 through 2017 GMU 15 in the Elk City zone was prioritized as part of a statewide effort to better understand survival and cause-specific mortality. Each winter approximately 30 calves are collared and monitored. This data is helping to support the

development of an integrated population model to better understand and analyze populations in this zone and others.

Population Surveys and Monitoring

Aerial surveys are conducted on a rotation schedule (every 5 years) and the Elk City zone is current, despite the most recent survey should not have been conducted due to lack of snow. However, due to lack of winter conditions in most recent years, aerial surveys are behind schedule. Radio collared cows and calves are monitored for cause-specific mortality and survival.

Inter-specific Issues

Livestock graze much of this zone on both private and public land. On private land on the west side of GMUs 14 and 16, competition with domestic livestock may be significant, especially during winter.

Predation Issues

Mountain lion harvest in the zone peaked in the mid 1990's at around 80 lions per year, and then declined to around 35 lions harvested annually from 2002–2012. Since 2012 lion harvest has been trending upwards, with a 2016 –2018 average of 52 lions harvested per year. Anecdotal information suggests a decrease in mountain lion abundance since the 1990s, but lion populations might be increasing since the early 2010s. Black bear harvest has been on an increasing trend over the last decade; from 2016–2018 there were on average 250 bears harvested annually. Wolves have been well established in the zone with 7 documented packs in 2015.

GMU 15 was prioritized as part of a statewide effort to better understand survival and cause-specific mortality. Cause-specific mortality for calves was evaluated from 2015 to 2018. Calf survival from 1 January to 31 May during each year was 100%, 91%, 71%, and 92% respectively, note however, that only 7 and 13 calves were collared in 2017 and 2018. Cumulative cause of death over this time period included unknown predation (3 calves), wolf predation (1 calf), and automobile accident (1 calf). Yearling survival was 100% in 2016, 2017, and 2018 from 1 January to 31 May (no yearlings were collared in 2015). In 2019, yearling survival was 89% during this time frame. From 1 June to 31 December, yearling survival was 75% in 2016, 60% in 2017 (only 5 yearlings collared in 2017), and 91% in 2018, with cause of death attributed to lion predation (4 yearlings), hunter harvest (2 yearlings), unknown predation (1 yearling), and unknown (1 yearling). No yearlings were monitored from 1 June to 31 December for 2019. Survival in 2016 (5 collared), 2017 (14 collared), and 2018 (15 collared) of adult cows was 100%, 100%, and 93%, respectively. The only mortality was contributed to hunter harvest. Monitored 2019 adult cow (8 collared) survival is 100%, thus far. Statewide calf survival in 2015, 2016, 2017, 2018, and 2019 was 82%, 76%, 52%, 68%, and 69%, respectively. Of those calf mortalities in 2015, 72.5% were due to lion predation, 22.5% wolf, and 5.0% accident. Lion predation again was the dominant cause of death in 2016 (35%) followed by 18% wolf predation, 16% malnutrition, 11% unknown predation, 6% accident, and 14% other factors. In 2017, statewide calf mortalities were 40% malnutrition, 29% lion predation, 9% unknown, 7% wolf, 6% unknown predation, and 9% other factors. During 2018, statewide calf mortalities were

34% lion predation, 18% unknown predation, 13% wolf predation, 7% malnutrition, and 23% related to other factors including uncertain (n = 15), capture mortality (n = 3), and coyote predation (n = 1). In 2019, lion predation accounted for 40% of statewide calf mortality, while wolf predation and malnutrition comprised 19% and 13%, respectively. Unknown, unknown predation, uncertain, and accidents each made up less than 10% of calf mortality statewide.

Winter Feeding and Depredation Issues

Emergency winter feeding has not been conducted recently.

Hunting and Harvest Characteristics

Total harvest in the Elk City Zone in 2018 was estimated at 482 elk based on the mandatory harvest report. This represents a 14% decrease in harvest from 2017 (557) and is lower than the previous three-year average of 591. Total hunter numbers were estimated at 2,352 for 2018 compared to 2,131 hunters for 2017. An average of 25% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 24% hunter success rate.

Disease Monitoring

Captured and collared elk are tested for the following: Bluetongue (BT), Bovine Respiratory Syncytial Virus (BRSV), Bovine Viral Diarrhea Virus (BVD), Infectious Bovine Rhinotracheitis virus (IBR), Epizootic Hemorrhagic Disease virus (EHD). No other disease testing has been conducted recently.

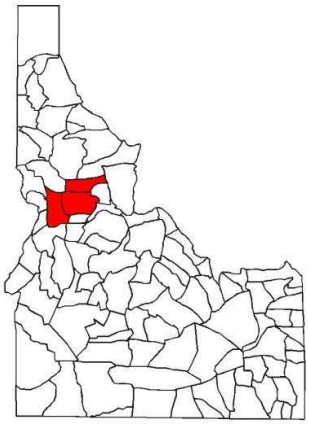
Management Discussion

All 3 GMUs should be surveyed periodically to evaluate population performance relative to plan objectives.

Elk

Elk City Zone (GMUs 14, 15, 16)

Square Miles =	1,838	3-Year Averages	
% Public Land =	82%	Hunters per square mile =	1.30
Major Land Type =	Forest	Harvest per square mile =	0.56
		Success Rate =	24%
		%6+ Points =	25%



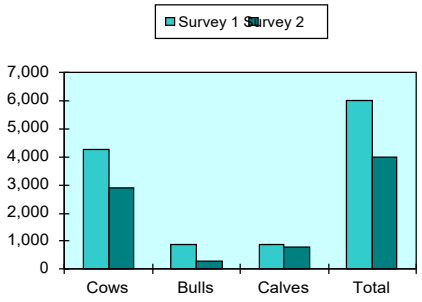
Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2015	2,900	283	151	3,150-4,650	675-1,000	350-575
Bulls per 100 Cows			10	5		18-24	10-14

Population Surveys

	Survey 1					Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
14	2008	2,402	419	573	3,394	2015	2,309	203	671	3,183
15	2008	965	169	148	1,282	2015	464	53	98	615
16	2008	897	275	154	1,326	2015	127	27	22	176
Comparable Surveys Total		4,264	863	875	6,002		2,900	283	791	3,974
Per 100 Cows			20	21				10	27	

Comparable Survey Totals

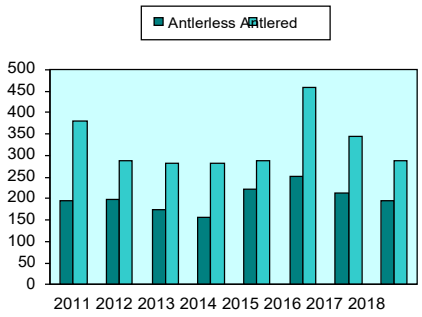


Zone Harvest Statistics

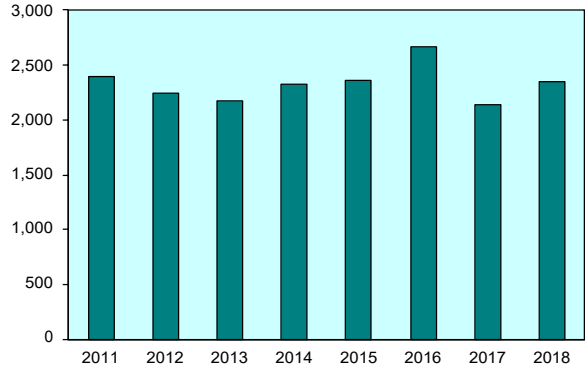
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	194	199	173	156	222	251	212	195
'A' Tag	111	126	73	86	105	121	132	82
'B' Tag	2	1	2	2	9	5	3	6
CH Tag	80	72	98	68	108	125	77	107
Antlered Harvest	380	289	282	281	287	457	345	287
'A' Tag	32	23	29	47	66	64	52	22
'B' Tag	348	266	252	234	219	393	293	263
CH Tag	0	0	1	0	2	0	0	2
Hunter Numbers	2,398	2,245	2,173	2,321	2,360	2,667	2,131	2,352
'A' Tag	732	638	627	666	623	753	569	637
'B' Tag	1,544	1,493	1,414	1,529	1,572	1,748	1,427	1,547
CH Tag	122	114	132	126	165	166	135	168
% 6+ Points	28	20	20	27	28	26	23	24

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

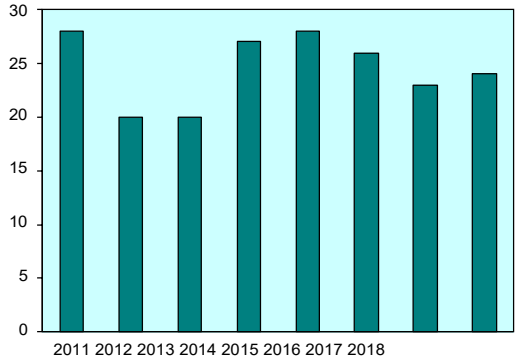


Figure 8. Elk City Zone Elk Status and Objectives.

Selway Zone (GMUs 16A, 17, 19, 20)

Historical Background

Historically, elk herds were scattered and numbers were low in this area. Few big game animals were found along Clearwater River by Lewis and Clark in the early 1800s, probably due in part to the dense, unbroken canopy of forest that covered the entire area. Wildfires burned over vast expanses near the beginning of the twentieth century, creating vast brush-fields that provided abundant forage areas for elk. Elk numbers increased following creation of these brush-fields, and elk numbers apparently peaked around 1950. Elk herds declined into the 1970s, partially due to: 1) maturation of brush-fields and declines in forage availability; 2) logging and road-building activity that increased vulnerability of elk to hunters under the then more liberal hunting seasons; and 3) loss of some major winter ranges. In response to declines in elk numbers, an either-sex hunting regime was replaced in 1976 with an antlered-only general hunting season. Elk herds then began rebuilding.

Management Objectives

Objectives in the Selway Zone (Figure 9) are to establish a population of 4,900–7,300 cows and 1,050–1,550 bulls, including 600–900 adult bulls. The most recent sightability survey in the zone was conducted in 2007 and population levels were below objectives with 3,381 cows, 934 bulls, and 728 adult bulls. An additional survey is needed to assess current population status, however, harvest and anecdotal information suggests the zone is likely still below objectives.

Like the Lolo Zone, management of the Selway Zone elk population and setting appropriate population objectives presents challenges. Calf recruitment remains low (~17 calves per 100 cows). Existing information suggests that both predation and density dependence (habitat limitations) have contributed to the decline.

Antlerless seasons were closed in 1998 to compensate for poor recruitment and 1996 –1997 winter mortality. B-tag sales were capped at 1,255 in 2000; they were reduced further to 1,067 for the 2008 season and 7 days cut from the end of the B-tag season. Also in 2008, the A-tag sales were capped at 647.

Habitat Management and Monitoring

Habitat productivity varies throughout the zone from high-precipitation, forested areas along the lower reaches of Selway River to dry, steep, south-facing ponderosa pine and grassland habitat along Salmon River. Many areas along Salmon River have a good mix of successional stages due to frequent fires within the wilderness. Fire suppression within portions of the Selway River drainage has led to decreasing forage production for big game. Road densities are low, contributing to low vulnerability for big game. Noxious weeds, especially spotted knapweed, have encroached upon, and greatly degraded, many important low-elevation areas of elk winter range in the lower Selway River drainage.

Due to the rugged and remote nature of this zone, human impacts have been very limited. In 1964, almost all of GMU 17 and a small portion of GMU 16A were included in the Selway-Bitterroot Wilderness. Most of GMU 19 became part of the Gospel Hump Wilderness in 1978, and in 1980, part of GMU 20 was included in the Frank Church River-of-No-Return Wilderness.

Historically, the Department has been involved with collaborative efforts such as the Clearwater Basin Elk habitat Initiative (1998), the Clearwater Summit (2003), the Clearwater Elk Collaborative (2003) and most recently, the Clearwater Basin Collaborative (2008). These collaborative efforts have supported increased fire frequency and more liberal "let burn" policies. From 2006 to 2009, 50,911 acres were burned from prescribed fire on lands administered by the Nez Perce-Clearwater National Forests. These prescribed burns should complement acres recently impacted by natural fires (large fires burned in GMUs 12, 17, and 20 during the summers of 2012 and 2013).

Biological Objectives

Sightability survey data, collected in this zone from 1987–2001, revealed declining numbers of adult elk and declining recruitment. Declining calf recruitment was initially detected in GMUs 16A and 17 in 1995 surveys. Winter 1996 –1997 was marked by severe conditions, including extremely deep snow exceeding 200% of average snow-pack in some areas. These conditions apparently caused higher-than-normal winter mortality leading to a significant decline in the GMU 16A and 17 herds. Survey data in 1999 suggested a 27% decline in adult elk over both GMUs. Composition surveys in GMU 17 during 2002 and 2003, and a sightability survey in 2004 revealed stable, low recruitment at 16 calves:100 cows, but in 2005 it declined to 11.0 calves:100 cows. In GMU 16A, the 2004 sightability survey revealed higher recruitment than in 1999.

Low calf recruitment was not observed in GMUs 19 and 20 until 1996. Survey data in 2001 suggested a significant decline in GMU 20 elk, but a significant increase in GMU 19 elk. However, fire activity during summer/fall 2000 may have been responsible for significant changes in elk distribution among GMUs 19, 19A, 20, and 20A. The 2007 sightability survey showed declines in total numbers in all the Selway Zone GMUs and further declines in recruitment in GMUs 16A and 17.

Capture, Radio-mark, and or Telemetry

No capture or radio-marking has been conducted recently.

Population Surveys and Monitoring

No sightability surveys have been conducted since 2007 and an additional survey is needed to assess current population status. However, due to lack of winter conditions in most recent years, aerial surveys are behind schedule. Aerial surveys are done on a rotation schedule (every 5 years).

Inter-specific Issues

The zone supports small, isolated white-tailed deer populations, low-density mule deer populations, and low-density moose populations. Grazing by cattle is virtually nonexistent.

Predation Issues

Selway Zone mountain lion harvest has remained static over the past decade. Black bear harvest is likewise stable. Wolf harvest has been minimal as well, ranging from 1 to 9 over the past 3 harvest seasons. In this zone, it is doubtful that harvest levels reflect population trend but rather reflect the remote, rugged nature of the habitat which, in combination with little access, precludes significant mountain lion, bear, or wolf harvest. Recent trends in mountain lion and bear populations are questionable. Wolves have been well established in this zone since the early 2000's, however, better information on wolf distribution and density within the zone would be useful to better address impacts of wolf predation on this elk population.

To gain a better understanding of cause-specific calf survival and management implications across the State, the Department began collaring calves in GMUs statewide in 2015. Within the Clearwater Region, GMUs 10A and 15 were included in this statewide monitoring effort. From 2015–2016, there were 6 calf mortalities in GMU 10A (43 total collared, 86% overall survival), and the main cause of death was wolf predation (33%) and unknown predation (33%); followed by mountain lion predation (17%) and malnutrition (17 %). From 2017–2019, there were 50 calf mortalities in GMU 10A (83 total collared, 40% overall survival) with main cause of death contributed to mountain lion (22%) and wolf predation (20%).Unknown, unknown predation, malnutrition, and accident made up 18%, 16%, 14%, and 4% mortality, respectively. Only 5 calf mortalities occurred in GMU 15 from 2015–2018 (58 total collared, 91% overall survival), including 3 from unknown predation, 1 from wolf predation, and 1 from an automobile accident. Statewide calf survival in 2015, 2016, 2017, 2018, and 2019 was 82%, 76%, 52%, 68%, and 69%, respectively. Of those calf mortalities in 2015, 72.5% were due to lion predation, 22.5% wolf, and 5.0% accident. Lion predation again was the dominant cause of death in 2016 (35%) followed by 18% wolf predation, 16% malnutrition, 11% unknown predation, 6% accident, and 14% other factors. In 2017, statewide calf mortalities were 40% malnutrition, 29% lion predation, 9% unknown, 7% wolf, 6% unknown predation, and 9% other factors. During 2018, statewide calf mortalities were 34% lion predation, 18% unknown predation, 13% wolf predation, 7% malnutrition, and 23% related to other factors including uncertain (n = 15), capture mortality (n = 3), and coyote predation (n = 1). In 2019, lion predation accounted for 40% of statewide calf mortality, while wolf predation and malnutrition comprised 19% and 13%, respectively. Unknown, unknown predation, uncertain, and accidents each made up less than 10% of calf mortality statewide.

Winter Feeding and Depredation

Emergency winter feeding has not been conducted recently.

Hunting and Harvest characteristics

Total harvest in the Selway Zone in 2018 was estimated at 245 elk based on the mandatory harvest report. This represents an 18% increase in harvest from 2017 (208) and is similar to the previous three-year average of 226. Total hunter numbers were estimated at 1,249 for 2018 compared to 998 hunters for 2017. An average of 44% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 21% hunter success rate.

Disease Monitoring

Disease monitoring has not been conducted recently.

Management Discussion

Aerial surveys should be conducted periodically to obtain adequate information to evaluate population performance relative to plan objectives. Better information is needed on wolf numbers, pack distribution, and impacts on elk in this zone.

Elk

Selway Zone (GMUs 16A, 17, 19, 20)

Square Miles =	2,527	3-Year Averages	
% Public Land =	100%	Hunters per square mile =	0.42
Major Land Type =	Forest	Harvest per square mile =	0.09
		Success Rate =	21%
		%6+ Points =	44%

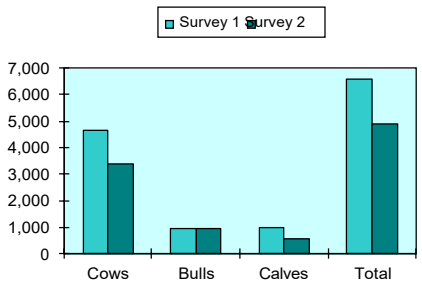
Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2007	3,381	934	728	4,900-7,300	1,050-1,550	600-900
Bulls per 100 Cows			28	22		25-29	14 - 18

Population Surveys

Survey 1						Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
16A	2004	457	96	130	683	2007	389	105	63	557
17	2004	2,076	486	332	2,894	2007	1,526	466	153	2,145
19	2001	1,508	240	394	2,142	2007	977	237	241	1,455
20	2001	596	138	120	854	2007	489	126	132	747
Comparable Surveys Total		4,637	960	976	6,573		3,381	934	589	4,904
Per 100 Cows			21	21				28	17	

Comparable Survey Totals

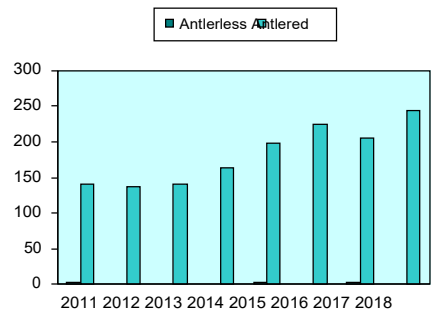


Zone Harvest Statistics

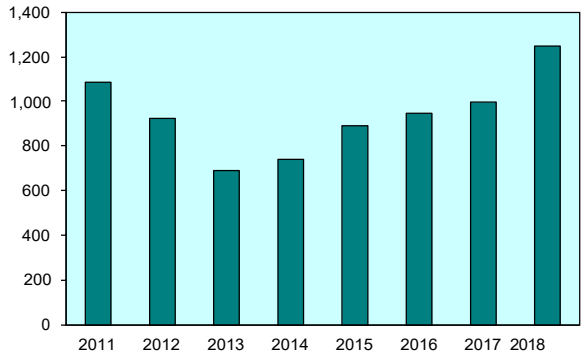
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	1	0	0	0	1	0	3	1
'A' Tag	0	0	0	0	0	0	0	0
'B' Tag	1	0	0	0	1	0	3	1
CH Tag	0	0	0	0	0	0	0	0
Antlered Harvest	141	137	141	163	198	225	205	244
'A' Tag	16	18	35	36	26	48	42	42
'B' Tag	125	119	106	127	172	177	163	202
CH Tag	0	0	0	0	0	0	0	0
Hunter Numbers	1,085	924	690	743	893	945	998	1,249
'A' Tag	196	211	170	168	196	212	220	290
'B' Tag	889	713	520	575	697	733	778	955
CH Tag	0	0	0	0	0	0	0	4
% 6+ Points	54	56	39	50	42	48	36	48

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

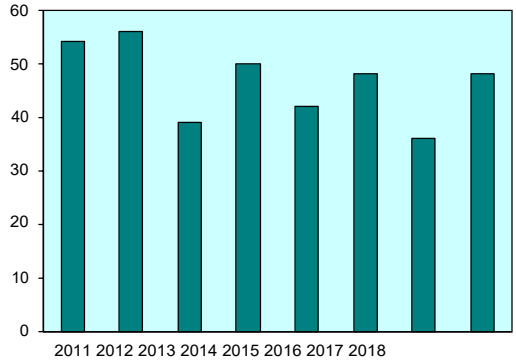


Figure 9. Selway Zone Elk Status and Objectives.

Sawtooth Zone (GMUs 33, 34, 35, 36)

Historical Background

Both mule deer and elk herds were over-harvested for hides and meat for mining camps in the mid-to-late 1800s. Lack of big game in the area resulted in the Idaho Legislature establishing the South Fork Game Preserve (now GMU 35) in 1909. This was the first game preserve in Idaho and remained in place until 1977. No hunting was allowed in the preserve until 1945 and deer populations increased rapidly. The elk herd increased to >1,000 by 1940 and approximately 2,000 by the early 1950s. Elk populations started rebounding in the late 1970s and peaked at a high of 7,200 elk in the early 1990s. The most recent sightability survey conducted in January 2017, estimated about 4,000 elk in the zone.

Sawtooth Zone is a popular destination for elk hunters from the Boise and Magic Valley areas. Hunter numbers declined to approximately 3,000 in 2009 when a quota was implemented that decreased the number of tags sold for the following 3 years. Numbers declined to about 2,000 in 2011 when the full quota was implemented. Antlerless harvest has averaged 62 elk during the past 5-years, and average antlered harvest increased 10% per year between 2011 and 2018 (Figure 10).

Zone quotas on tags were implemented in 2009, and are based on population status during the 2009 winter survey. Tag reductions were phased in over a 3-year period, and leveled off at ~1,500 B-tags, and ~550 A-tags. These numbers equate to a 46% reduction from 2008 tag numbers.

Management Objectives

Objectives for Sawtooth Zone (Figure 10) include maintaining a population of 3,000–4,500 cows and 630–945 bulls, including 360–540 adult bulls in the wintering population in this zone. Bull:cow and adult bull:cow ratios will be managed at 18–24 bulls:100 cows and 10–14 adult bulls:100 cows, the statewide general zone. A harvest of ≥750 bulls each year is desired; however, this goal has been unattainable this decade and is unlikely to occur in the near future based on current status of this elk herd. These objectives reflect a balance between the desire for a relatively large elk population for hunting and viewing, and concerns about feeding elk during winter. The winter elk objectives have only been met once in the mid-90s, which was the same era when elk were being fed in the Stanley basin (GMU 36).

Habitat Management and Monitoring

More than 90% of the land in the zone is managed by the USFS. Access ranges from areas of relatively high road density between Garden Valley and Lowman to the Frank Church River-of-No-Return Wilderness and Sawtooth National Recreation Area. In several areas, road densities are very high and access management programs could provide less motorized access to address elk vulnerability issues. However, limiting motorized vehicle access has been met with great resistance from land management agencies, organized motorized groups, and other State agencies with different priorities and objectives. Reducing motorized access may also increase the perception of hunter crowding in areas that remain open to motor vehicles.

Habitat conditions on winter range have been an important consideration since the early 1930s. Reports by USFS and National Park Service biologists described conditions of degraded winter range in 1932. There have been numerous attempts to improve habitat on winter range, but none have shown significant success. Currently, most south and west-facing slopes along the south fork of the Payette River are dominated by rush skeleton weed and invasive annual grasses, severely reducing the value of thousands of acres of important winter range for elk and deer.

Elk caused damage to several ranches (primarily cattle and small horse feeding operations) in the Garden Valley area during the early and mid-2000s. During spring, elk concentrate on new forage growth on private rangeland in the Garden Valley area. Depredation complaints declined to almost zero between 2008 and 2013. However, complaints during 2014–2017 increased as the elk population has started to rebound (primarily for fence damage and cattle rangeland/pasture). Very limited winter range in the Stanley area has been impacted by non-migratory elk that are being fed through the winter by locals. However, this wintering herd has been reduced from nearly 500 animals to only about 20–40 by 2012. In previous years, portions of local summer range were also noticeably impacted by elk; however, recent elk densities and distribution patterns do not appear to be cause for concern.

Biological Objectives

Following a regional trend, the elk population south of the Salmon River had increased dramatically until the late 1990's. Calf recruitment in the past has been high; however, fluctuation in calf:cow ratios over the last few years has been common. The 2013 and 2017 sightability surveys documented improvement in both calf:cow (39:100 and 36:100 respectfully) and bull:cow (14:100 and 17:100 respectfully) ratios over those observed in 2009 (19:100 calf:cow, 9:100 bull:cow). Calf ratios of 46:100 were documented during a comp survey in 2014 and averaged 36:100 during 2015–2019.

Capture, Radio-mark, and or Telemetry

Elk have been monitored extensively in the Zone since 2008. Between 2008 and 2012 elk were marked with GPS collars to study the effect of predators (mainly wolves) on elk along the South Fork Payette River. Between March 2014 and January 2019, 172 calves and 40 cows were captured and marked with radio-collars. This effort has allowed managers to monitor survival of 6-month old calves to full recruitment into the population. Spring recruitment rates of 44:100, 27:100, 24:100, 6:100, 29:100, and 21:100 were documented in 2014, 2015, 2016, 2017, 2018, and 2019 respectively. The low year of 6:100 followed one of the heaviest snow-pack winters on record since the collar efforts started. Previously captured cow elk are also followed to monitor survival and aid in management of this elk herd. Cow survival averaged 93% during the past 5 years.

Population Surveys and Monitoring

The latest population survey occurred in winter 2017. The sightability survey estimated 2,659 cows, 472 bulls, and 967 calves, a 10% increase overall compared to 2013 survey, but still below objective (Figure 10). Survey conditions in 2017 were not ideal as heavy snows fell during the survey period and elk were very widely scattered along drainages in heavy cover. GMU 36 was also not flown during this survey; thus, the population estimate is conservative. The next survey

is scheduled to occur in 2021. Herd composition surveys have been conducted annually since 2009 to ascertain calf:cow ratios and recruitment. During January 2019, a composition survey was flown in parts of unit 33 and 35. A total of 1,173 elk were classified, resulting in a calf:cow ratio of 33:100.

The Sawtooth Zone is a summer-range destination for elk both in the Sawtooth Zone and from surrounding elk zones. GMUs 34 and 36 are high-elevation GMUs with abundant high-quality summer range. These 2 GMUs have few wintering elk, because of their high-elevation. Due to an influx of migrating elk in summer and fall, the elk population in GMU 36 increases from a few hundred to over 4,000 elk during the hunting season.

Inter-specific Issues

The Garden Valley area has been a significant wintering area for mule deer. In the early 1940s, estimated winter deer populations were from 5,000–12,000. The elk population consisted of <2,000 animals. From 1964 to the late 2000s it was estimated that mule deer numbers did not exceed 2,000 and there were approximately 5,500 elk wintering in the area. In recent years the ratio of deer and elk has shifted. In 2017, 4,000 elk were estimated on winter range. Mule deer were surveyed in January 2011, and approximately 4,500 deer were estimated in GMUs 33 and 35. Livestock grazing has been significantly reduced over the last 60 years; however, domestic sheep grazing in localized areas (Middle Fork Payette drainage) have reduced habitat quality by removing nearly all the understory vegetation in localized areas.

Predation Issues

Black bear, wolf, and mountain lion populations are well established in the Sawtooth Zone. Sightability surveys conducted in 2009 indicated calf survival was extremely low. According to radio-collar research conducted between 2008 and 2012 by the Department, wolf predation was a leading source of mortality for 6 month elk calves and cows in the Sawtooth Zone. However, both calf:cow ratios and calf survival have rebounded and stabilized in recent years. Neonate survival has not been researched. Neonate survival was studied in the nearby Salmon Zone, where black bears were the leading cause of predation on newborn elk claves. Lion predation occurs year-round and has been the primary cause of mortality in both cow and calf elk during all winters between 2014 and 2018.

Current calf:cow ratios have stabilized during the past 5 years and has averaged 38:100. Calf:cow ratios well below normal ranges for this elk herd were documented in 2008 and 2009, but improved in 2010 following a wolf hunting season and mild winter. Just as important, winter survival rate of calves improved in 2010, which resulted in an estimated end-of-winter calf:cow ratio of 31:100. In 2011, early-winter calf:cow ratios were again improved; however, winter survival rate of calves was low, and the estimated calf:cow ratio at the end-of-winter was 19:100. Thirty-eight calves:100 cows were documented in early 2013, double what was observed in 2009. Calf ratios of 46:100 were documented during a comp survey in early 2014, and high winter survival rate of calves was documented. Improvements in calf survival coupled with higher early-winter calf:cow ratios are occurring at the same time that wolf numbers are being reduced through regulated wolf hunting. Impacts of wolves on elk population dynamics have been a significant issue for elk management in this zone, and will continue to be monitored very

closely. The Department has developed, approved, and implemented a predation management plan for the Sawtooth Elk Zone.

Winter Feeding and Depredation

Sawtooth Zone has been a focal point for winter feeding since the 1930s. Severe winter mortality occurred on a regular basis starting in 1932 when 93 dead elk were found and 1,800 dead deer were buried along South Fork Payette River. Winter feeding programs for mule deer started shortly thereafter. Within a few years, elk were consuming more feed than mule deer. Winter feeding has only occurred twice in the past 10 years. The winter of 2016–2017 was the worst on record. Approximately 450 deer and 600 elk were fed by the Department at 22 feed sites along the Middle and South Fork Payette Rivers in GMU's 33 and 35.

There has been no evidence of Brucellosis in elk at any of the feed sites. There is some concern about feeding mule deer on limited deer winter range in Garden Valley. Elk and deer winter range overlap and elk often out-compete deer at feed sites. Placing feed sites in areas not used by deer should be considered to alleviate this concern. Additionally, identifying sites used more often by deer may help balance deer and elk sites along the South Fork Payette River. Elk and deer also have different nutritional needs, and pellets formulated for one species, may not provide adequate nutrition for the other. Native range has the capability to support the current elk herd in nearly all situations. However, there is considerable public demand for feeding elk, mainly where wintering deer and elk are observable by the public concern about the welfare of the herd

Historically, winter feeding occurred in the Stanley Basin where they could not survive severe winters without supplemental feed. The herd grew to 500–1,000 animals and severely impacted the small amount of natural winter range available. During the early to mid-2000's winter feeding ceased and antlerless hunting that targeted the wintering population reduced numbers to a much lower level. Currently, between 100–200 elk spend their winter in GMU 36.

Hunting and Harvest Characteristics

Total harvest in the Sawtooth Zone in 2018 was estimated at 606 elk based on the mandatory harvest report. This represents an 18% increase in harvest compared to 2017 (494) and is 7% higher than the previous three-year average of 511. Total hunter numbers were estimated at 2,058 in 2018 compared to 2,039 hunters in 2017. On average, 35% of the bulls harvested in these GMUs over the past 3 years (2016 –2018) have been 6-point or larger and hunter success averaged 29%.

Disease Monitoring

No specific disease monitoring occurred within the Zone during the reporting period.

Management Discussion

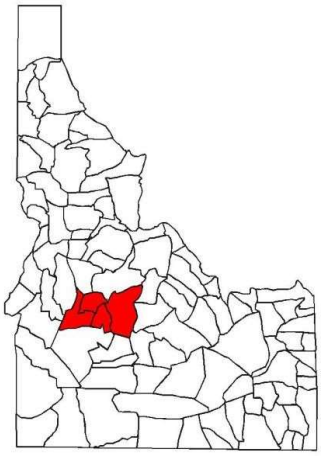
Information about impacts of several large fires in the last 10 years on calving, summer, or winter ranges is needed. Potential impacts of the new mix of large predators are being studied by Department researchers, but more information is needed to determine how all the predators and

prey interact in the zone. Inventory and mapping of current range of rush skeleton weed on summer and winter habitats is desirable in understanding the impacts on carrying capacity.

Elk

Sawtooth Zone (GMUs 33, 34, 35, 36)

Square Miles =	2,541	3-Year Averages	
% Public Land =	97%	Hunters per square mile =	0.78
Major Land Type =	Forest	Harvest per square mile =	0.27
	Rangeland	Success Rate =	29%
		%6 + Points =	35%



Winter Status & Objectives

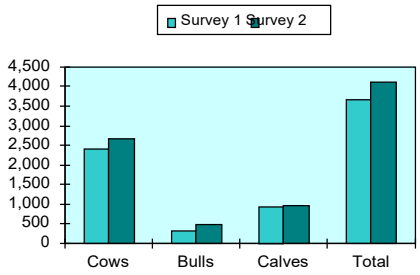
Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2017	2,659	472	272	3,000-4,500	630-945	360-540
Bulls per 100 Cows			18	10		18 - 24	10 - 14

Population Surveys

Survey 1						Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
33	2013	2,396	324	926	3,646	2017	2,630	468	951	4,049
34	ND					ND				
35	ND					ND				
36	ND					2017	29	4	16	49
Comparable Surveys Total		2,396	324	926	3,646		2,659	472	967	4,098
Per 100 Cows			14	39				18	36	

Note: ND = no survey data available.

Comparable Survey Totals

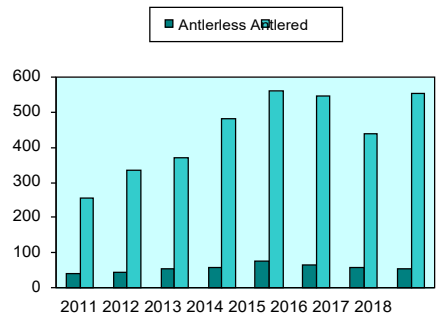


Zone Harvest Statistics

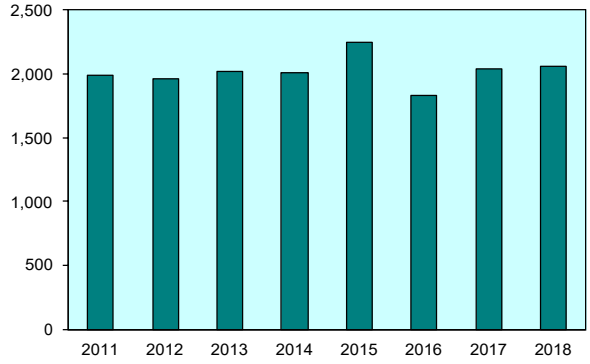
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	40	42	54	56	76	65	57	54
'A' Tag	9	17	27	22	37	35	26	29
'B' Tag	0	0	1	0	0	0	0	0
CH Tag	31	25	26	34	39	30	31	25
Antlered Harvest	254	334	369	480	562	545	437	552
'A' Tag	47	60	75	144	109	116	96	125
'B' Tag	195	268	279	321	434	420	333	416
CH Tag	12	6	15	15	19	9	8	11
Hunter Numbers	1,987	1,963	2,022	2,004	2,241	1,827	2,039	2,058
'A' Tag	543	511	518	539	592	477	529	525
'B' Tag	1,336	1,344	1,381	1,349	1,521	1,243	1,396	1,432
CH Tag	108	108	123	116	128	107	114	101
% 6+ Points	26	32	31	29	34	31	37	38

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

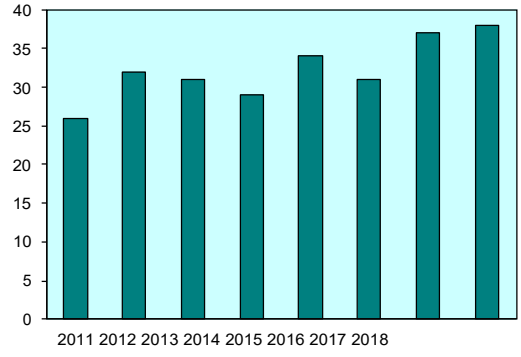


Figure 10. Sawtooth Zone Elk Status and Objectives.

Owyhee Zone (GMUs 38, 40, 41, 42,)

Historical Background

During the late 1800s, elk in the Owyhee Zone were nearly eliminated due to unrestricted hunting and conflicts with the area's growing livestock industry. Elk from Yellowstone National Park were released near Murphy, ID in the 1950s. Elk densities remained low throughout the twentieth century but began to increase in the 1990s. Recently, ingress from the rapidly growing northern Nevada elk population and natural reproduction has contributed to herd growth.

Nevada Division of Wildlife (NDOW) efforts to reestablish elk in the northern portion of that state have been very successful. Elk are expanding their range into suitable habitats in Nevada and Idaho that have not had resident elk for nearly a century. Translocations have been used to hasten the growth in elk numbers. Since the mid-1980s, 523 elk have been released into 5 areas in Elko County, Nevada. In 2017, NDOW counted 3,742 elk in this population between both states.

GMUs 38, 40, 41, and 42 – While an elk is occasionally documented in GMU 38, it is rare and elk are not likely to establish, or be encouraged to establish, in this GMU due to agricultural practices.

Elk in GMUs 40 and 42 are suspected of using winter ranges in both Idaho and Oregon. In GMU 41, elk wintering east of Highway 51 move south to summer ranges in Nevada, although an increasing number are staying in GMU 41 year-round.

Nevada conducted its most recent aerial survey on the Idaho/Nevada border in 2017. A total of 2,120 elk were counted in Idaho west of the Bruneau River; with a calf:cow ratio of 38:100, and bull:cow ratio of 40:100. Additional cow and bull tags have since been added to GMU 41 to help alleviate depredation concerns with this growing elk herd.

Management Objectives

The objective in the Owyhee Zone (Figure 11) is to maintain or increase the elk population as long as it is socially acceptable and does not impact the mule deer population.

The GMUs within this zone vary in their potential to sustain elk populations under current biological and social constraints. Management will retain enough flexibility to adjust elk numbers to address issues that may arise, particularly depredations on private property.

Habitat Management and Monitoring

Habitat quality varies considerably within the Owyhee Zone, as does the potential for depredation issues. Most elk habitat in Owyhee County is managed by the Bureau of Land Management or the Idaho Department of Lands; however, small parcels of private property include habitats that receive substantial elk use.

Juniper encroachment is a concern in portions of GMUs 40 and 42. While juniper does provide screening cover, it generally reduces habitat quality for elk. Efforts are underway on both private and public land to remove juniper. These efforts are showing promise, and will likely benefit elk.

Biological Objectives

Because elk densities have traditionally been low in this zone, sightability surveys have not been conducted to provide data on population dynamics. Elk objectives are not derived from aerial surveys due to expansive land area, dispersed groups of elk, poorly defined winter range, difficult winter access, and interstate migratory patterns. Anecdotal information suggests these populations are increasing, but accurate estimates of population size are unavailable. Increases in elk numbers over the next 5–10 years are inevitable from natural reproduction and continued ingress of elk from Nevada.

Capture, Radio-mark, and or Telemetry

We initiated a new elk monitoring study in the Owyhee Zone in 2018. In early 2019, we captured 22 cow elk in GMUs 40 and 41, and fitted them with GPS tracking collars. We will use the data to determine elk use of public versus private land, spatial and habitat use, and causes of mortality.

Population Surveys and Monitoring

We conducted no aerial population surveys during winter 2018/19.

Inter-specific Issues

The Owyhee Zone has traditionally had a large population of mule deer; although deer numbers have declined in past decades. The current elk population is not believed to have negative impact on mule deer numbers.

Conflicts between elk and livestock have been a major influence on elk management in portions of Owyhee County. Concentrations of elk on private land holdings in Owyhee County have created depredation problems. Landowners' major concerns are damage to fences and loss of private rangeland forage. The Department works closely with private landowners to alleviate chronic problems. On federal lands, any resource damage attributed to elk will be jointly evaluated by the Department and managing agency.

Predation Issues

Mountain lion are likely the primary predator of elk in this zone. Predation is presently not a major factor limiting growth of these elk populations, nor is it anticipated to become a concern.

Winter Feeding and Depredation

There has been no recent winter-feeding of elk in this zone.

Hunting and Harvest Characteristics

Total harvest in the Owyhee Zone in 2018 was 286 elk based on the mandatory harvest report. This represents a 6% increase from 2017 (269) and is higher than the previous three-year average of 261. Total hunter numbers were estimated at 635 hunters in 2018 compared to 591 for 2017 .

An average of 83% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6 point or larger with a 46% hunter success rate.

Disease Monitoring

We did not conduct elk disease monitoring in the Owyhee Zone in 2018.

Management Discussion

Current population estimates are based on reports from ranchers, biologists, and hunters, but better data will be necessary to manage anticipated higher numbers. In the future we hope to develop survey methods to produce population estimates. We will also continue our elk study to determine spatial and habitat use on private and public land.

Elk

Owyhee Zone (GMUs 38, 40, 41, 42)

Square Miles =	8,003	3-Year Averages	
% Public Land =	72%	Hunters per square mile =	0.07
Major Land Type =	Forest	Harvest per square mile =	0.07
		Success Rate =	46%
		%6+ Points =	81%

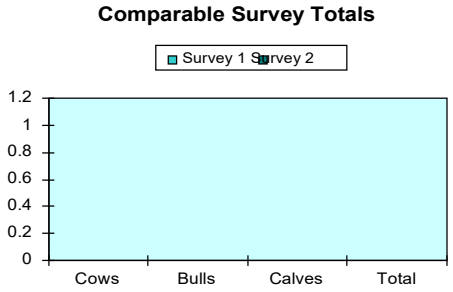
Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
Bulls per 100 Cows			0	0			

Population Surveys

Survey 1						Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
Comparable Surveys Total										
Per 100 Cows										

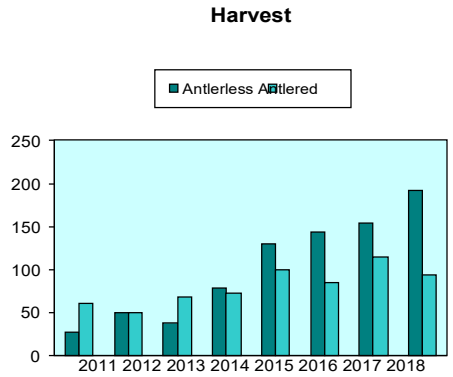
Note: ND = no survey data available.

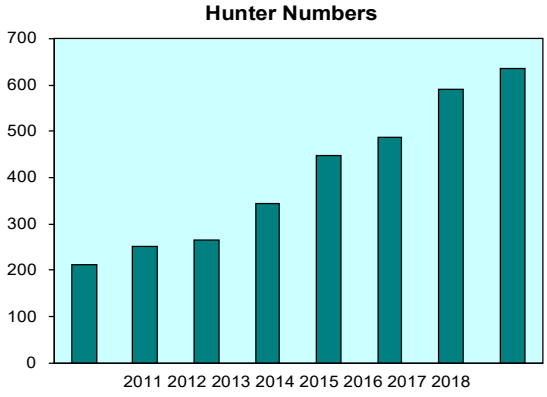


Zone Harvest Statistics

	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	27	49	37	78	129	144	154	192
'A' Tag	0	0	0	0	0	0	0	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	27	49	37	78	129	144	154	192
Antlered Harvest	60	49	68	73	100	85	115	94
'A' Tag	0	0	0	0	0	0	0	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	60	49	68	73	100	85	115	94
Hunter Numbers	212	251	267	344	448	486	591	635
'A' Tag	0	0	0	0	0	0	0	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	212	251	267	344	448	486	591	635
% 6+ Points	73	94	82	85	78	88	78	83

Note: % 6+ pts does not include spike-only harvest.





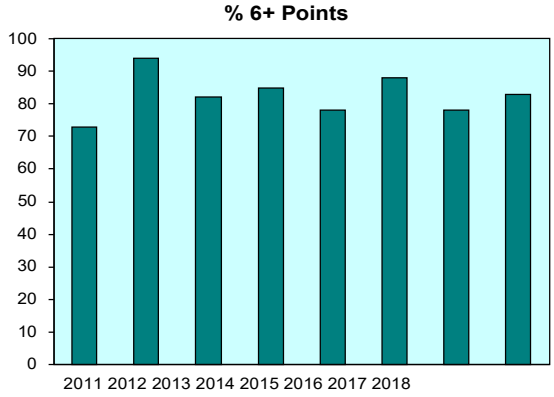


Figure 11. Owyhee Zone Elk Status and Objectives.

Boise River Zone (GMU 39)

Historical Background

In the early 1900's, elk herds in the Boise River drainage were heavily harvested for hides and meat for mining camps in the area. Sparse elk herds in Idaho were bolstered with translocated elk from the Yellowstone area in the late 1930s. Relatively liberal either-sex seasons were maintained in this zone until the early 1970s, suppressing the herds well below habitat potential. In 1975, bull-only hunting was implemented and season structure overlapped general deer season. In the early 2000's the general elk season moved away from October general deer hunt. This was done to address hunter congestion/conflicts between deer and elk hunters, and to address concerns about overharvest of bulls. Since then, the wintering herd has increased to over 7,000 head.

The interest in elk hunting in Boise River Zone increased along with growth in the elk population. Boise River is one of the most popular elk zones in the state with approximately 5,400 hunters. This zone may be increasing in popularity due to human population increase, its proximity to Boise, and limited over-the-counter opportunities, including the quota implemented in the Sawtooth Zone.

Management Objectives

Objectives for Boise River Zone (Figure 12) are to maintain a population of 3,200–4,800 cows and 650+ bulls, including 375+ adult bulls. Management in the southern and west portions of the zone has focused on addressing significant landowner concerns about elk depredations. Currently, this zone is meeting objectives for elk.

Habitat Management and Monitoring

Boise River Zone includes 2,455 miles^2 of excellent elk habitat. The conditions range from wilderness in Sawtooth National Recreation Area to areas with high road density near Boise. Boise National Forest manages the majority of summer habitat occupied by elk.

There are large areas of private land on the west side of the zone in the Horseshoe Bend area. Landowners in this area have suffered significant damage to hay crops and private rangeland. We are addressing these issues through increased sportsman opportunities, such as LPH hunts, increased tag numbers, as well as through occasional kill permits. On the south side of the zone, winter and spring concentrations of elk have been in conflict with livestock operations, primarily on rangeland, but occasionally with crops. Urban expansion in the foothills around Boise has led to significant conflicts with wintering elk. The loss of winter range and conflicts with homeowners may be one of the most serious factors limiting elk populations in Boise River Zone.

Several large wildfires have converted shrub lands to grasslands, and may have improved some wintering conditions for elk. The effects of wildfire in summer and transition ranges have generally improved conditions for elk. However, rush skeleton weed (*Chondrilla juncea*) has invaded many of the lower southwest-facing slopes, and poses a serious threat to elk winter range. Skeleton weed is likely to have long-term implications, and will reduce the carrying capacity of habitat for elk. This is especially true on and around the Boise River Wildlife

Management Area where the majority of the area burned in the 2016 Highland Fire is dominated by rush skeleton weed.

Biological Objectives

The implementation of bull-only hunting and a series of mild winters in the late 1980s increased elk survival in this zone. Calf recruitment is fair to good with a ratio of 28–50 calves per 100 cows, although calf numbers have been on the low end of the range for several years. Bull harvest exceeded the potential for bull calf recruitment through much of the 1990s. For example, in 1997, 664 bulls were harvested and an estimated 550 bull calves were recruited. Seasons were adjusted in 2002 to move the general bull hunt out of the period of overlap with general deer season with the hope of reducing bull harvest to below replacement potential. In 2003, only 369 bulls were harvested. Recently, bull harvest levels have increased to near previous levels as the elk population increased. Furthermore, between 500 and 1,000 antlerless tags have been offered during the general deer season in addition to a 500 tag controlled antlerless only muzzleloader hunt in September. Antlerless opportunity will continue to be offered to maintain elk herds at current levels and to address depredation concerns with landowners.

Capture, Radio-mark, and or Telemetry

Twenty calves were captured and equipped with GPS collars in 2018-2019 to assess over-winter survival and seasonal migrations. An additional 25 previously marked cows were also monitored during this reporting period. The information generated by this collaring effort has helped identify important calving areas and migration corridors. This information has also been used by USFS and BLM to develop travel management plans that may protect elk during vulnerable periods.

Population Surveys and Monitoring

During sightability surveys in February 2011, over 2,600 elk were located between Interstate 84 and the South Fork Boise River. It is speculated that heavy snow accumulations in the high country, the closure of the South Fork feeding station, and possible pressure from wolves have pushed elk lower in recent years than what was previously documented.

In January 2015, the Boise River and Smokey-Bennett Zones were surveyed at the same time. An estimated 7,199 elk were observed in GMU 39 with calf:cow ratio at 24:100 and bull:cow ratio of 23:100. Results were very similar to the 2011 survey.

Inter-specific Issues

Boise River Zone (GMU 39) is also one of the top mule deer hunting GMUs in Idaho. Except for weed expansion, other recent changes to habitat have favored elk. Winter survey flights show the separation of wintering deer and elk. Mule deer are not using some of the wintering areas they used when elk numbers were lower.

Predation Issues

Black bear and mountain lion populations are well established and apparently stable in Boise River Zone. The mountain lion population is well above levels of the 1950s. Wolves were

reintroduced in Idaho in 1995. On occasion, wolves ventured into the GMU during 1995–2002. By the end of 2006, wolves from 5–7 packs had occupied portions of the Boise River zone. Necropsy data collected in 2018 indicate predation was not been a primary cause of elk mortality in the zone.

Winter Feeding and Depredation

Winter feeding sites were maintained along Middle Fork Boise River for both deer and elk through the 1950s. The only elk winter feeding that has taken place in the last 20 years has been around subdivisions to bait elk away from problem areas. Native range has the capability to support the current elk herd in nearly all situations.

In March 2011, approximately 35% (2,621elk) of all elk observed (7,275) in the zone were found in the Mayfield area where significant complaints from landowners about elk depredation have occurred. Conversely, in 2000, only 422 elk were observed near Mayfield, which represents 10% of all elk surveyed in the zone that year. Radio collars were placed on elk in the area in 2009. Data collected from this telemetry effort suggested that over 1,800 elk wintering in Mayfield may be spending the hunting season outside of GMU 39. Ground and aerial survey efforts conducted in 2013 showed approximately 600–700 elk wintered in the Mayfield area that year. During the 2015 survey approximately 360 elk spent the winter in the flats along the Danskin Front. An additional 1,800 elk wintered in the Danskin Mountains between Highway 20 and Black's Creek Road.

In 2009, the Mayfield/Danskin area was removed from the general season hunt and a controlled either-sex hunt was added. This was done to address concerns from landowners about trespass hunting, illegal off-road vehicle use, and general unethical behavior. In 2015, several changes to the elk season framework were made to assist landowners with depredation issues in this area, including elimination of the January landowner permission hunt (LPH) at landowner request, extending the December LPH to 1 Oct–31 Dec, and increasing tags from 100 to 300. Additionally, resources were repositioned to provide technical assistance to landowners, create range rehabilitation and range improvement projects for wildlife and livestock, and help mitigate for elk depredations. Another LPH hunt with 75 tags was added to the Horseshoe bend area to address increasing depredation issues at the request of landowners in 2015.

Landowner permission hunts have been somewhat effective at reducing landowner complaints about elk in past years in the Horseshoe Bend area. Additionally, fewer landowner complaints have occurred in the Mayfield area since 2015, likely because the majority of elk have remained in the Danskin foothills.

Hunting and Harvest Characteristics

Total harvest in the Boise River Zone in 2018 was estimated at 944 elk based on the mandatory harvest report. This represents a 3% decrease in harvest compared to 2017 (973) and 4% below the three-year average of 986. Total hunter numbers were estimated at 5,464 in 2018 compared to 5,392 hunters in 2017. On average, 30% of the bulls harvested in this GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 18% hunter success rate.

Disease Monitoring

No disease monitoring occurred in the zone during the reporting period. Collecting Obex samples to test for Chronic Wasting Disease (CWD) has periodically occurred at harvest check stations. Chronic Wasting Disease has not been found in Idaho.

Management Discussion

The Boise River Zone contains both winter and summer range for this elk herd. Current sightability surveys provide excellent information on the status of the entire herd. Due to urban sprawl and housing development demands in the foothills near Boise, better information and mapping of winter ranges and migration corridors are needed to help mitigate and address this issue. Noxious weed inventory and mapping on winter and summer ranges are also needed to combat weed invasion and subsequent loss of critical wildlife habitat.

Elk

Boise River Zone (GMU 39)

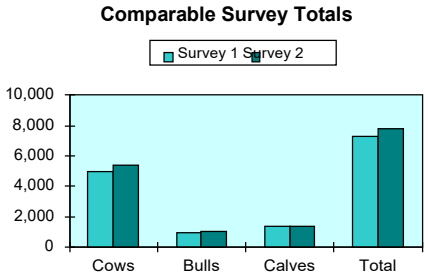
Square Miles =	2,444	3-Year Averages	
% Public Land =	76%	Hunters per square mile =	2.18
Major Land Type =	Forest	Harvest per square mile =	0.75
	Rangeland	Success Rate =	19%
		%6+ Points =	30%

Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2015	5,417	1,035	619	3,200 - 4,800	650 - 950	375 - 575
Bulls per 100 Cows			19	11		18 - 24	10 - 14

Population Surveys

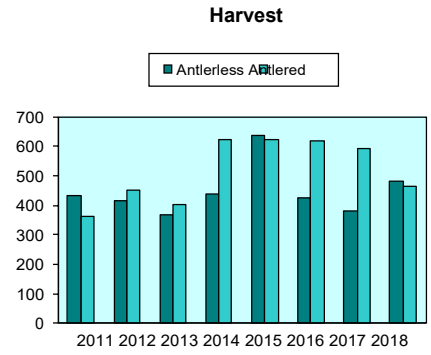
Survey 1						Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
39	2011	4,971	916	1,388	7,275	2015	5,417	1,035	1,317	7,769
Comparable Surveys Total		4,971	916	1,388	7,275		5,417	1,035	1,317	7,769
Per 100 Cows			18	28				19	24	

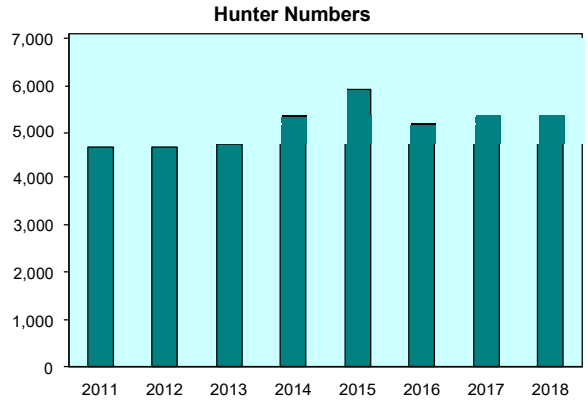


Zone Harvest Statistics

	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	434	417	369	440	636	424	380	481
'A' Tag	99	88	4	26	15	0	11	16
'B' Tag	1	2	9	0	0	0	0	5
CH Tag	334	327	356	414	621	424	369	460
Antlered Harvest	362	452	404	622	623	618	593	463
'A' Tag	5	8	12	13	7	11	14	0
'B' Tag	325	419	380	596	580	566	533	424
CH Tag	32	25	12	13	36	41	46	39
Hunter Numbers	4,616	4,617	4,687	5,303	5,826	5,138	5,392	5,464
'A' Tag	915	868	382	336	327	292	279	299
'B' Tag	2,750	2,882	3,099	3,568	3,753	3,345	3,513	3,541
CH Tag	951	867	1,206	1,399	1,746	1,501	1,600	1,624
% 6+ Points	22	25	24	28	29	25	30	36

Note: % 6+ pts does not include spike-only harvest.





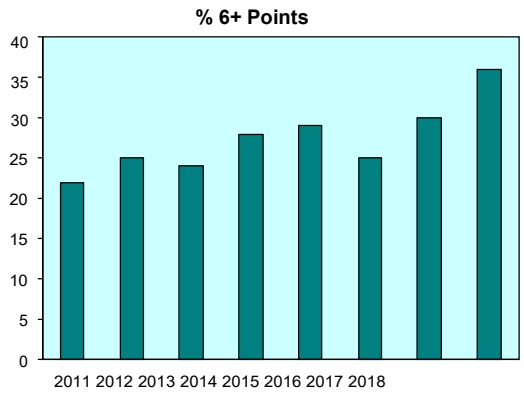


Figure 12. Boise River Zone Elk Status and Objectives.

McCall Zone (GMUs 19A, 23, 24, 25)

Historical Background

Elk were abundant in McCall Zone prior to European settlement in the late 1800s. The proliferation of mining due to the gold rush in the late 1800s and early 1900s led to widespread slaughter of these animals to supply meat and hides for mining camps. As a result, elk became increasingly rare to see, and at one time were thought to be eliminated from the area. Remnant populations relegated to the more remote rugged portions of the zone survived. Translocation of elk from Yellowstone to places in McCall Zone such as New Meadows occurred in the late 1930s. Liberal either-sex hunting seasons kept population numbers of elk suppressed well into the 1970s. The implementation of bulls-only hunting in 1976 spurred an increase in elk populations in McCall Zone.

Management Objectives

Objectives for McCall Zone (Figure 13) are to maintain a population of ≥2500 cow and ≥525 bull elk, including ≥300 adult bulls. This zone will be managed to produce statewide minimums for bull:cow ratio (18–24 bulls:100 cows) and adult bull:cow ratio (10 –14 adult bulls:100 cows). The total population objective draws a balance among concerns about depredation damage, the desire for a reasonably large elk population, and concern about habitat-carrying capacity. High road densities in some areas could affect elk vulnerability.

Habitat Management and Monitoring

Over 70% of McCall Zone is in public ownership and management. Little Salmon River and North Fork Payette River valley bottoms comprise most private ownership. Private land in this zone is predominantly agricultural or rural subdivision in nature.

Timber harvest and livestock grazing affect habitat change on public lands on the west side of McCall Zone. Wildfire or prescribed burning influence habitat alteration on lands on the east side of the zone. Several large fires have burned in this zone in the last decade. A balance exists among early, mid, and late successional habitat stages that are used by elk in summer. Winter ranges occur primarily on public ground. Federal land management agencies (USFS and BLM) have active prescribed burning programs that should maintain good winter range habitat for elk in McCall Zone. Noxious weed invasion, specifically from spotted knapweed (*Centaurea maculosa*) and yellow starthistle (*Centaurea solstitialis*), is a threat to winter ranges in Little Salmon River and Salmon River drainages of GMU 23. Elk/human conflicts occur during summer and fall months when elk enter agricultural fields in the valley bottoms to forage.

Road densities are estimated at less than 0.25 miles per square mile in GMUs 19A and 25. Road densities in GMUs 23 and 24 are estimated at greater than 2.5 miles per square mile. Active timber harvest programs are anticipated to increase these road densities in some areas which may affect elk security in the near future.

Biological Objectives

The McCall Zone elk population performed well from the mid-1980s to early 1990s, but calf production declined from 30+ calves:100 cows to poor (≤20 calves:100 cows) zone-wide

throughout the early 2000s. The 2014 survey showed an increase in calf recruitment with a calf:cow ratio of 30:100. Bull:cow ratios are 29:100, above statewide minimum goals. Survey results in 2014 show this elk population is at the upper end of management objectives for cows (3,652), above the upper objective for overall bull numbers (1,071), and adult bulls (689).

Capture, Radio-mark, and or Telemetry

No capture, radio-marking, or telemetry occurred in the McCall Elk Zone during the reporting period.

Population Surveys and Monitoring

No population surveys occurred in the McCall Elk Zone during the reporting period.

Researchers radio-collared 21 cow elk during the winters of 2014–2016. At the beginning of the reporting period, four of these elk were still transmitting. These were monitored monthly during the reporting period. There were no mortalities during this time, but all four of these collars were eventually censored due to collar failure (end of battery life).

Inter-specific Issues

Elk must compete zone-wide primarily with mule deer and to a lesser extent with white-tailed deer. Extensive domestic sheep and cattle grazing occur on elk range in the western part of the zone. A small number of bighorn sheep occupy a portion of rugged country less favored by elk in the northeast portion of the zone. The competitive effect of these species on one another is largely unknown.

Predation Issues

Wolves, black bears, and mountain lions are prevalent in McCall Zone. Bears are at a moderate but stable level, and mountain lions were thought to be at the highest number in recent history; however, anecdotal information indicates this species may be declining. There is little information as to the extent these species prey on elk in this zone. Wolves, introduced in Idaho's backcountry in 1995, are now well established in this zone and occur at medium to high densities.

Winter Feeding and Depredation

The remote location of most winter range in this zone precludes large-scale winter-feeding. In severe winters, some feeding has occurred in GMU 24. The Goldfork bait site was established in 1985 to bait elk out of winter livestock feeding operations. The Department no longer has any involvement in this operation.

Hunting and Harvest Characteristics

Total harvest in the McCall Zone in 2018 was estimated at 946 elk based on the mandatory harvest report. This represents a 2% decrease in harvest from 2017 (964) and is below the previous three-year average of 1,128. Total hunter numbers were estimated at 6,053 for 2018 compared to 6,634 hunters for 2017. An average of 38% of the bulls harvested in these GMUs

over the past 3 years (2016–2018) have been 6-point or larger with an average of 16% hunter success rate.

Disease Monitoring

No disease monitoring has occurred in the McCall Elk Zone during the reporting period.

Management Discussion

Carrying capacity of winter ranges is unknown. This information is needed to identify appropriate elk densities that will maintain optimum productivity and harvest. Impacts of potential predators on elk production are largely unknown. Information is lacking on the migration routes and patterns of elk in this zone.

Elk

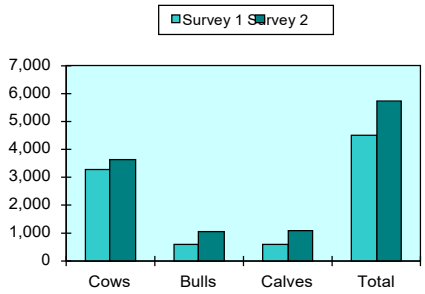
McCall Zone (GMUs 19A, 23, 24, 25)

Square Miles =	2,984	3-Year Averages	
% Public Land =	82%	Hunters per square mile =	2.13
Major Land Type =	Forest	Harvest per square mile =	0.54
		Success Rate =	16%
		% 6+ Points =	38%

Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2014	3,635	1,052	689	2,500-3,700	525-800	300-450
Bulls per 100 Cows			**29**	**19**		**18 - 24**	**10 - 14**

Comparable Survey Totals



Population Surveys

	Survey 1					Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
19A	2010	973	211	144	1,328	2014	1,180	277	252	1,709
23	2010	1,937	282	388	2,607	2014	2,027	511	702	3,240
24	ND					ND				
25	2010	382	123	74	579	2014	428	264	124	816
Comparable Surveys Total		**3,292**	**616**	**606**	**4,514**		**3,635**	**1,052**	**1,078**	**5,765**
Per 100 Cows			**19**	**18**				**29**	**30**	

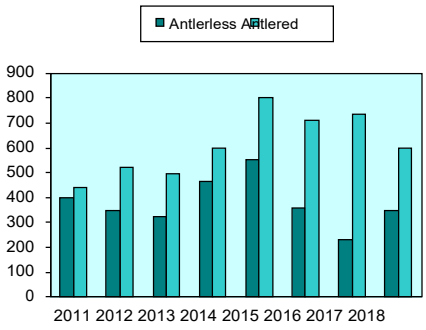
Note: ND = no survey data available.

Zone Harvest Statistics

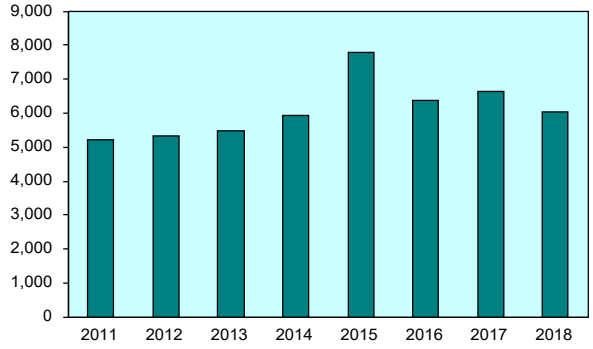
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	400	347	325	463	550	359	229	347
'A' Tag	210	183	174	307	385	210	62	203
'B' Tag	0	1	5	0	0	5	0	0
CH Tag	190	163	146	156	165	144	167	144
Antlered Harvest	439	520	494	599	803	710	734	599
'A' Tag	133	177	187	183	257	224	346	314
'B' Tag	300	337	303	413	537	476	381	276
CH Tag	6	6	4	3	9	10	7	9
Hunter Numbers	5,207	5,340	5,461	5,927	7,782	6,375	6,634	6,053
'A' Tag	2,081	2,098	2,159	2,478	3,651	2,652	3,050	2,804
'B' Tag	2,544	2,727	2,823	2,942	3,617	3,245	3,114	2,762
CH Tag	582	515	479	507	514	478	470	487
% 6+ Points	33	32	29	33	35	36	40	37

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

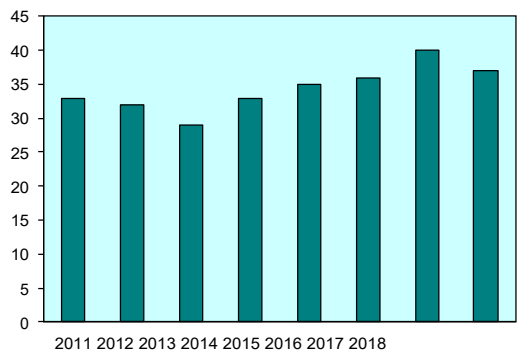


Figure 13. McCall Zone Elk Status and Objectives.

Middle Fork Zone (GMUs 20A, 26, 27)

Historical Background

Elk were in low abundance in Middle Fork Zone through the early part of the twentieth century. As has occurred over much of the west, elk herds expanded dramatically since the mid-1970s. Populations peaked in the mid-1990s at around 9,500 elk and have declined to their lowest number of 4,229 elk in 2011. Today, the Middle Fork Zone winters about 4,900 elk. Approximately 4,000 people were hunting elk in Middle Fork Zone through 1997. Caps on hunter numbers have reduced participation to <3,000 hunters since 1998. Hunter numbers have steadily increased since a low of 757 in 2012 to 1,416 participating in 2018. Seasons (Appendix A) traditionally have been general hunts from mid-September to mid-late November for any bull in GMUs 20A and 26, and brow-tined bulls in GMU 27. Much of the hunting pressure and harvest, particularly for mature bulls, has come during September. Bull harvest has doubled since 2012, and the percent of 6 point or better bulls in the harvest has averaged 42% during that timeframe.

Management Objectives

Objectives for Middle Fork Zone (Figure 14) are to stabilize and increase the elk population to meet the minimum objectives of 3,850 cows and 690 (390 adult) bulls. In 2017, total bull objectives were met, but the population is still below cow objectives (3,395 cows in 2017 survey). Total bull ratios have improved to meet objectives and are currently at 24:100 (bulls:cows). Herds will be managed to maintain the bull:cow ratios to 18 –24 bulls:100 cows, which translates to 10 –14 adult bulls:100 cows.

Habitat Management and Monitoring

Habitat ultimately determines elk densities and productivity. Over past decades, fire suppression contributed to conifer encroachment on forage-producing areas. Large wildfires in the early 2000s have partially reversed this trend and enhanced elk habitat in high-elevation summer range. Present management policies that allow fire a larger role in wilderness ecosystems will benefit elk habitat and elk over the long run. This benefit of fire is only in the absence of noxious weeds and invasive annual grasses. The spread of noxious weeds and invasive annual grasses, such as knapweed, rush skeletonweed, and cheatgrass are likely having significant negative impacts on winter and summer range productivity in the Middle Fork Zone.

Biological Objectives

Elk populations have performed poorly over the past 10–15 years. Elk numbers in the Middle Fork zone have decreased by 55% between the high in 1995 and 2011. The population estimate from the 2011 elk sightability helicopter surveys was 4,229. Calf:cow ratios were poor at 13 calves:100 cows and bull:cow ratios were less than desirable at 14 bulls:100 cows. A sightability survey in 2017 gave an estimate of 4,860 elk suggesting that populations may be starting to stabilize. Estimates included 3,395 cows, 660 calves, and 805 bulls (530 adult bulls). Both calf:cow and bull:cow ratios have increased to 19 calves:100 cows and 24 bulls:100 cows.

Capture, Radio-mark, and or Telemetry

No capture, radio-marking, or telemetry occurred in the Middle Fork Elk Zone during the reporting period.

Population Surveys and Monitoring

No population surveys or monitoring occurred in the Middle Fork Elk Zone during the reporting period.

Inter-specific Issues

Past elk densities may have negatively impacted habitat capacity for deer but at current densities this is likely not an issue. Elk could also have an impact in some of the less rugged grassland areas used by bighorn sheep and mountain goats. Domestic livestock grazing is minimal in this zone.

Predation Issues

Black bear densities appear to be low to moderate. Mountain lion densities are at least moderate, perhaps high. Wolves reintroduced by USFWS in 1995 are well established in these GMUs. The addition of wolves has likely impacted bear, mountain lion, and coyote populations. At some level, predation may benefit elk herds to the extent that it keeps elk herds below habitat carrying capacity, where they can be more productive. However, excessive levels of predation on elk calves can also suppress prey populations to undesirable low levels. At this point, the population is considered limited by predation but the exact impact is not fully understood.

Winter Feeding and Depredation

Winter feeding has not occurred in these remote big game GMUs.

Hunting and Harvest Characteristics

Total harvest in the Middle Fork Zone in 2018 was estimated at 280 elk based on the mandatory harvest report. This represents an 18% decrease in harvest from 2017 (343) and represents the first decline from the overall trend in increasing harvest since 2011. Total hunter numbers were estimated at 1,416 for 2018 compared to 1,388 hunters for 2017. An average of 43% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with an average harvest success rate of 23% during that time.

Disease Monitoring

No disease monitoring occurred in the Middle Fork Elk Zone during the reporting period.

Management Discussion

Lower elk numbers in the Middle Fork may be contributing to the increase in mule deer herds (17% increase in deer population since 2011). The most productive elk herds are those maintained at a level below carrying capacity. Better information is needed to identify appropriate elk densities that will maintain optimum productivity and harvest. This population is considered to be limited by predation. However, the exact impacts of predation on elk

populations in the Middle Fork Zone are not fully understood. Migratory patterns are largely unknown, making it difficult to develop effect habitat enhancement projects or evaluate the influence of wildfire on population performance.

Elk

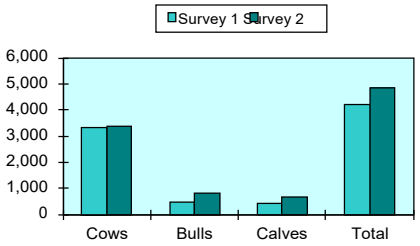
Middle Fork Zone (GMUs 20A, 26, 27)

		3-Year Averages	
Square Miles =	2,885	Hunters per square mile =	0.47
% Public Land =	100%	Harvest per square mile =	0.11
Major Land Type =	Forest	Success Rate =	23%
		% 6+ Points =	43%

Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2017	3,395	805	530	3,850-5,750	690-1,030	390-810
Bulls per 100 Cows			24	16		18-24	10-14

Comparable Survey Totals



Population Surveys

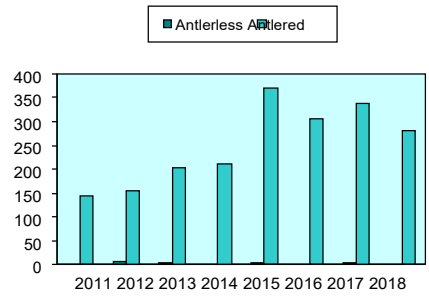
	Survey 1					Survey 2				
	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
	2011	3,341	462	420	4,223	2017	3,395	805	660	4,860
Comparable Surveys Total		3,341	462	420	4,223		3,395	805	660	4,860
Per 100 Cows			14	13				24	19	

Zone Harvest Statistics

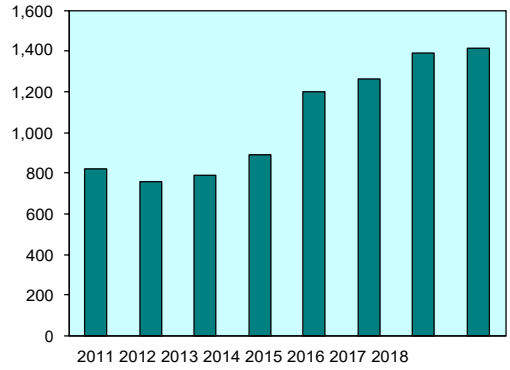
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	0	6	2	0	2	0	5	0
'A' Tag	0	3	1	0	0	0	0	0
'B' Tag	0	3	0	0	2	0	0	0
CH Tag	0	0	1	0	0	0	5	0
Antlered Harvest	145	155	203	210	369	306	338	280
'A' Tag	38	43	63	39	96	103	108	56
'B' Tag	107	112	140	171	273	203	230	224
CH Tag	0	0	0	0	0	0	0	0
Hunter Numbers	821	757	791	890	1,200	1,262	1,388	1,416
'A' Tag	285	197	213	262	360	340	421	399
'B' Tag	536	560	578	628	840	922	962	1,015
CH Tag	0	0	0	0	0	0	5	2
% 6+ Points	44	50	34	39	45	45	39	45

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

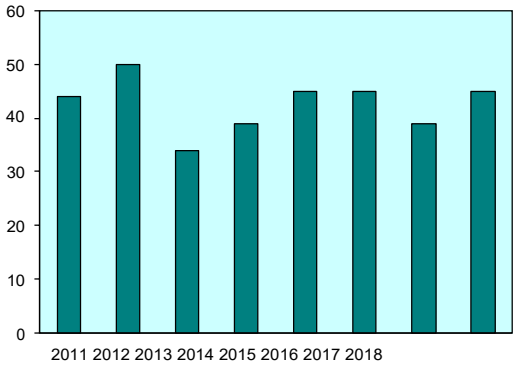


Figure 14. Middle Fork Zone Elk Status and Objectives.

Weiser River Zone (GMUs 22, 32, 32A)

Historical Background

Elk were present in Weiser River Zone prior to European settlement in the mid-1800s. Native Americans hunted elk for food in Weiser River drainage. Proliferation of mining due to the gold rush in the late 1800s and early 1900s probably led to year-round slaughter of these animals to supply meat and hides for mining camps. Subsequent intensive livestock grazing denigrated habitat in the zone. Translocation of elk from Yellowstone to places in McCall Zone on the periphery of Weiser River Zone occurred in the late 1930s to bolster sagging elk populations. Regulated livestock grazing began during the same era. Transient elk from these populations probably repopulated Weiser River Zone. Liberal either-sex hunting seasons kept population numbers of elk suppressed well into the 1970s. GMU 22 became a controlled either-sex hunt in 1971 and reopened to general bulls-only hunting in 1977. The implementation of bulls-only hunting spurred an increase in elk populations in Weiser River Zone.

The elk population in the agricultural area of the west half of GMU 32 consisted of transient elk prior to 1980. Following several hard winters, elk herds started moving into this area. Most elk were there in winter, and a few groups of elk became year-round residents. The population of elk in Weiser River Zone reached its sociological tolerance level in the early 1990s. Populations remained relatively stable (between 4,000–5,500 elk) through the mid-2000s but began increasing shortly thereafter and had grown to an estimated 10,471 by the 2013 survey.

Management Objectives

The goal for Weiser River Zone (Figure 15) is to reduce cow elk population levels to 3,300+ elk while maintaining ≥670 bulls and ≥ 325 adult bulls. Most antlerless elk reduction will occur in GMUs 22 and 32. The total population objective draws a balance between the concern about depredation damage and the need to sustain a reasonably large elk population. In 2013, controlled hunt cow tags were increased in attempt to push elk populations back toward objectives. Antlerless harvest increased but was not sufficient to curb population growth or private land depredations. Therefore, in 2017, a general cow hunt was added to the Weiser River Zone A and B tags to increase harvest and put more pressure on depredating elk. As herds are reduced and population levels are stabilized, liberal cow seasons will be reevaluated. This zone will be managed to produce statewide minimums for bull:cow ratio (18–24 bulls:100 cows) and adult bull:cow ratio (10–14 adult bulls:100 cows).

Habitat Management and Monitoring

About 60% of GMUs 22 and 32A and 20% of GMU 32 is in public ownership and management. The western portion of GMU 32 and the Weiser River valley of GMUs 22 and 32A are predominately private land. Agricultural products are primarily dry-land grazing, grain production, and hay fields.

Timber harvest, livestock grazing, and prescribed fires are the most significant land uses affecting habitat change in this zone. Most forested habitat is in the early to mid-successional stage. Winter ranges occur primarily on public ground in GMU 22, but mostly on private ground in GMUs 32 and 32A. Noxious weed invasion, such as yellow starthistle and whitetop (*Cardaria draba*), is a threat to winter range habitat. Andrus WMA in the southwest portion of GMU 22 is

managed for elk and mule deer winter range and encompasses about 8,000 acres. Extensive road building from past timber harvest and mining activities contribute to high vulnerability of elk during hunting seasons in this zone. The inherent lack of security cover and openings created from timber harvest compound elk vulnerability. Active timber harvest programs are anticipated to increase these road densities in localized areas in the near future.

Elk/human conflicts occur during summer, fall, and winter months in GMUs 22 and 32A when elk enter agricultural fields in valley bottoms to forage. Resident elk in GMU 32 have caused landowners concern about damage to fences, fall-plowed fields, row crops, and alfalfa hay fields.

Biological Objectives

In the 2019 survey, cow numbers were >400 over the upper management objective (5,409), bulls were >200 over objectives (1,234), and adult bulls were considerably above objectives (598). Through the 1980s and 1990s, the Weiser River Zone was a highly productive elk population. Calf production averaged well over 40 calves:100 cows. Burgeoning elk populations and dry summers have probably contributed to the more recent decline to fair productivity of 25 calves:100 cows observed in the 2013 survey. However, 2019 survey results estimate an increase in that ratio to 34 calves:100 cows and bull:cow ratios at the upper end of objectives at 23 bulls:100 cows.

Capture, Radio-mark, and or Telemetry

Ten adult cow elk were captured and radio-marked in the Weiser River Zone in March, 2019. These were collared in conjunction with 2 ongoing research projects in the area. The first was initiated during the winter of 2016–2017 to address questions of elk movements, habitat use, and vulnerability to harvest in the southwest portion of the Brownlee and Weiser River Zones. The second began in early 2018 and is focused on depredation prevention techniques.

Population Surveys and Monitoring

An aerial sightability survey was performed in the Weiser River Zone Jan 14 – Feb 12, 2019. The total population estimate for the zone was 8,505 elk (5,409 cows, 1,234 bulls, 1,862 calves). At the beginning of the reporting period, there were a total of 23 (21 GPS, 2 VHF) radio-collared cow elk on the air. Elk were monitored monthly throughout the reporting period. Five mortalities occurred during this time, primarily from harvest. The 10 adult, cow elk that were collared in March, were added to the monitoring list and tracked monthly.

Inter-specific Issues

Elk compete zone-wide with mule deer for habitat. Intensive domestic sheep and cattle grazing occur over most of the zone. The competitive effect of these species on one another is largely unknown.

Predation Issues

Black bear and mountain lions occur in moderate to high numbers in Weiser River Zone. There is no indication that predation is having an impact on elk calf recruitment or survival of elk in

this zone. Wolves have colonized the zone but are not a significant mortality factor at this time. Coyotes are common, but are not known to have much effect on elk populations.

Winter Feeding and Depredation

Winter feeding takes place on an irregular basis in Weiser River Zone. Most elk feeding operations have been initiated to bait elk away from livestock feeding operations. Winter feeding occurred during the winter of 2016–2017 to address increased depredations brought on by an abnormally high snow year.

Hunting and Harvest Characteristics

Total harvest in the Wiser River Zone in 2018 was estimated at 1,783 elk based on the mandatory harvest report. This represents a 4% decrease in harvest from 2017 (1,847) and is below the previous three-year average of 1,884. Total hunter numbers were estimated at 8,502 for 2018 compared to 6,417 hunters for 2017. An average of 25% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 24% overall hunter success rate.

Disease Monitoring

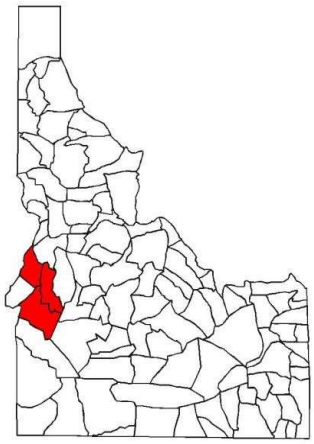
No disease monitoring occurred in the Weiser River Elk Zone during the reporting period.

Management Discussion

Carrying capacity of winter ranges is unknown. This information is needed to identify appropriate elk densities, which will maintain optimum productivity and harvest. Knowledge of inter-specific competition is needed. Information is lacking on migration routes and patterns of elk in this zone and interaction with elk in the adjacent Brownlee Zone. Consequently, research was initiated during the winter of 2016–2017 to address questions of elk movements, habitat use, and vulnerability to harvest in the southwest portion of the Brownlee and Weiser River Zones. Elk in this zone remain above objectives and elk depredations on private lands continue to increase. In 2018, IDFG, in collaboration with the University of Idaho, began a project to develop management tools designed to modify elk behavior resulting in increased social carrying capacity in areas with a high proportion of private agriculture.

Elk

Weiser River Zone (GMUs 22, 32, 32A)



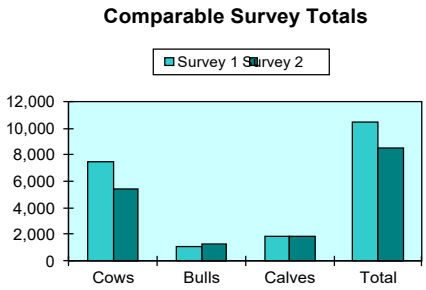
Square Miles =	2,895	3-Year Averages	
% Public Land =	51%	Hunters per square mile =	2.56
Major Land Type =	Rangeland	Harvest per square mile =	1.34
	Forest	Success Rate =	24%
		%6+ Points =	25%

Winter Status & Objectives

Zone Total	Year	Current Status Cows	Bulls	Adult Bulls	Objective Cows	Bulls	Adult Bulls
	2019	5,409	1,234	598	3,300-5,000	670-1,000	325-500
Bulls per 100 Cows			23	11		18 - 24	10 - 14

Population Surveys

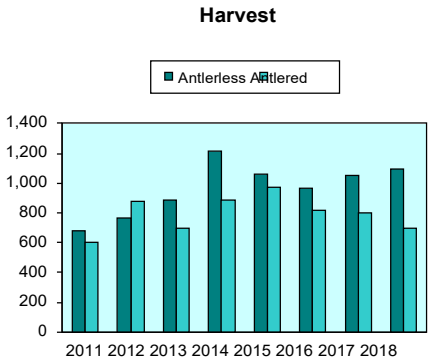
Zone Total	Year	Survey 1 Cows	Bulls	Calves	Total	Year	Survey 2 Cows	Bulls	Calves	Total
	2013	7,461	1,116	1,894	10,471	2019	5,409	1,234	1,862	8,505
Comparable Surveys Total		7,461	1,116	1,894	10,471		5,409	1,234	1,862	8,505
Per 100 Cows			15	25				23	34	

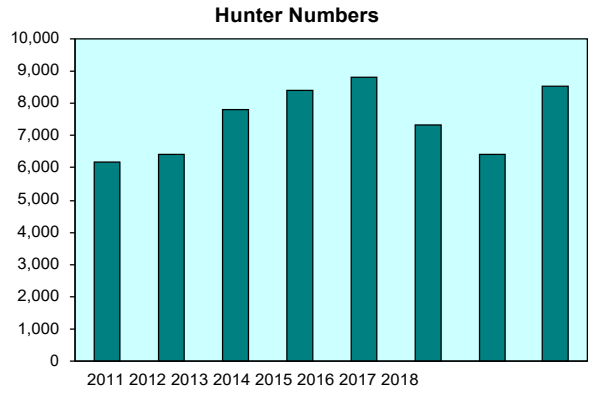


Zone Harvest Statistics

	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	680	767	886	1,216	1,061	959	1,050	1,090
'A' Tag	152	180	150	377	132	105	283	482
'B' Tag	0	9	2	0	0	2	269	140
CH Tag	528	578	734	839	929	852	498	468
Antlered Harvest	603	876	694	883	968	818	797	693
'A' Tag	121	167	150	162	259	229	151	197
'B' Tag	482	708	543	719	709	589	645	495
CH Tag	0	1	1	2	0	0	1	1
Hunter Numbers	6,187	6,406	7,811	8,417	8,814	7,334	6,417	8,502
'A' Tag	1,564	1,625	1,788	2,218	1,883	1,404	1,725	3,946
'B' Tag	2,696	2,876	3,154	3,348	3,782	2,998	3,456	3,303
CH Tag	1,927	1,905	2,869	2,851	3,149	2,932	1,236	1,253
% 6+ Points	23	26	26	27	25	19	25	31

Note: % 6+ pts does not include spike-only harvest.





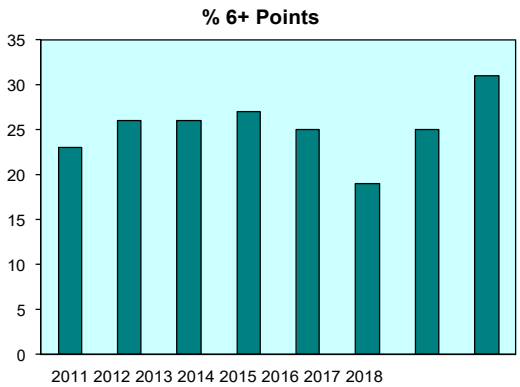


Figure 15. Weiser River Zone Elk Status and Objectives.

Brownlee Zone (GMU 31)

Historical Background

Elk were present in Brownlee Zone prior to European settlement in the mid-1800s. Native American tribes hunted elk for food in Weiser River drainage. As in other areas in Idaho, proliferation of mining due to the gold rush in the late 1800s and early 1900s probably led to year-round slaughter of these animals to supply meat and hides for mining camps. Subsequent heavy livestock grazing denigrated habitat in the zone. Translocation of elk from Yellowstone to places in Weiser River and McCall zones occurred in the late 1930s to bolster dwindling elk populations. Regulated livestock grazing occurred during the same era. Transient elk from these populations probably repopulated Brownlee Zone. Liberal either-sex hunting seasons kept population numbers of elk suppressed well into the late 1960s. GMU 31 was closed to elk hunting in 1968. The GMU reopened to controlled hunts in 1976. Protected by conservative bull-only tags, this elk population expanded rapidly in the late 1980s. This population reached its sociological tolerance level in the early 1990s. Intense controlled antlerless hunting and animal displacement reduced the population below objectives by the early 2000s. Since that time, populations have increased and numbers meet or exceed upper management objectives for both bulls and cows.

Management Objectives

Objectives for Brownlee Zone (Figure 16) are to maintain a population of ≥550 cow and ≥150 bull elk, including ≥75 adult bulls. This zone will be managed to produce statewide minimums for bull:cow ratio (18–24 bulls:100 cows) and adult bull:cow ratio (10 –14 adult bulls:100 cows). The total population objective draws a balance between concerns about depredation damage and providing quality elk hunting opportunities.

Habitat Management and Monitoring

About 50% of Brownlee Zone is in public ownership and management. The southern and eastern portions of the GMU are predominately private land. Agricultural products are primarily dry-land grazing and hay fields. Higher elevations are timbered; lower elevations are primarily shrub-steppe or desert.

Timber harvest, livestock grazing, and prescribed fires all affect habitat change in this zone. Winter ranges occur primarily on public ground. Noxious weed invasion, such as yellow starthistle and whitetop, is a threat to winter range habitat. Andrus WMA is managed for elk and mule deer winter range and comprises about 8,000 acres in the northwest part of the zone. Elk/human conflicts occur during summer, fall, and winter months when elk enter agricultural fields in valley bottoms to forage.

Extensive road building from past timber harvest and mining activities contribute to high vulnerability of elk during hunting seasons in this zone. The inherent lack of security cover and openings created from timber harvest compound elk vulnerability.

Biological Objectives

2019 survey results show a total population estimate of 1,874 elk in the Brownlee Zone. Cow elk estimates exceed the upper end of management objectives at 942, while bulls and adult bulls are

well above management objectives at 599 and 466 respectively. Elk have not reached their habitat potential in this zone but have reached a threshold of tolerance among user groups concerned.

Capture, Radio-mark, and or Telemetry

Five elk were captured and radio-marked in the Brownlee Zone during the reporting period.

Population Surveys and Monitoring

An aerial sightability survey was conducted during late Jan 14 – Feb 12, 2019, in the Brownlee Elk Zone. Survey results estimate 1,874 elk (942 cows, 599 bulls, and 334 calves) elk in the zone. Eight radio-collared cow elk were monitored monthly during this reporting period. There were three mortalities during this time. Five additional cow elk were captured in March of 2019 and monitored monthly through June, 2019. Monitoring is part of two larger, ongoing projects. The first was initiated in 2017 to investigate elk movements and vulnerability in the Weiser River and Brownlee Elk Zones. The second began in 2018 and is focused on depredation prevention techniques.

Inter-specific Issues

Elk compete zone-wide with mule deer for habitat. Most of the zone is also managed for intensive domestic sheep and cattle grazing. The competitive effect of these species on one another is largely unknown.

Predation Issues

Black bear and mountain lions occur in low to moderate numbers in Brownlee Zone. There is no evidence these species have an effect on the elk population in this zone. Wolves occur intermittently in this zone and are not a significant mortality factor at this time. Coyotes are common but are not known to effect elk populations.

Winter Feeding and Depredation

Winter feeding in the Brownlee Zone is an extremely rare event. Winter feeding occurred during the winter of 2016 –2017 to address increased depredations brought on by an abnormally high snow year. Previously, winter feeding occurred on a limited basis in close proximity to domestic livestock feeding operations during the severe winter of 1992–1993.

Hunting and Harvest Characteristics

Total harvest in the Brownlee Zone in 2018 was estimated at 275 elk based on the mandatory harvest report. This is similar to harvest in 2017 (261) and represents an 8% decrease from the previous three-year average of 288. Total hunter numbers were estimated at 922 for 2018 compared to 1,022 hunters for 2017. An average of 51% of the bulls harvested in these GMUs over the past 3 years (2016–2018 have been 6-point or larger with a 27% hunter success rate overall.

Disease Monitoring

No disease monitoring has occurred in the Brownlee Elk Zone during the reporting period.

Management Discussion

Carrying capacity of winter ranges is unknown. This information is needed to identify appropriate elk densities, which will assist with maintenance of optimum productivity and harvest. Information is lacking on migration routes and patterns of elk in this zone and interaction with elk in the adjacent Weiser River Zone. Knowledge of inter-specific competition is needed. Research was initiated during the winter of 2016–2017 to address questions of elk movements, habitat use, and vulnerability to harvest in the southwest portion of the Brownlee and Weiser River Zones.

Elk

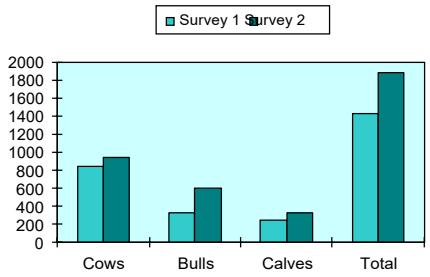
Brownlee Zone (GMU 31)

Square Miles =	598	3-Year Averages	
% Public Land =	50%	Hunters per square mile =	1.62
Major Land Type =	Rangeland	Harvest per square mile =	0.91
	Forest	Success Rate =	27%
		%6+ Points =	51%

Winter Status & Objectives

Zone Total	Year	Current Status Cows	Bulls	Adult Bulls	Objective Cows	Bulls	Adult Bulls
	2019	942	599	466	550 - 850	150-200	75-125
Bulls per 100 Cows			64	49		18 - 24	10 - 14

Comparable Survey Totals



Population Surveys

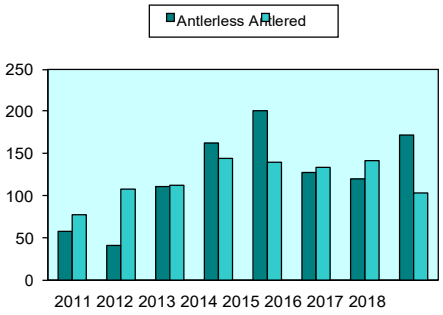
Zone Total	Year	Survey 1 Cows	Bulls	Calves	Total	Year	Survey 2 Cows	Bulls	Calves	Total
	2013	841	333	249	1423	2019	942	599	334	1,875
Comparable Surveys Total		841	333	249	1423		942	599	334	1,875
Per 100 Cows			40	30				64	35	

Zone Harvest Statistics

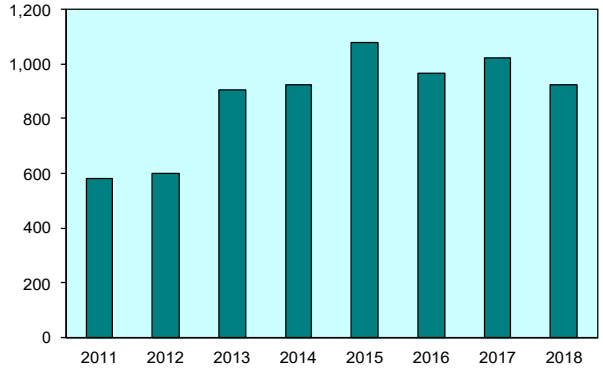
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	57	41	111	162	200	128	120	172
'A' Tag	8	3	14	20	19	0	17	35
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	49	38	97	142	181	128	103	137
Antlered Harvest	78	107	113	145	140	134	141	103
'A' Tag	52	74	78	107	101	99	85	64
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	26	33	35	38	39	35	56	39
Hunter Numbers	582	601	903	921	1,076	965	1,023	922
'A' Tag	353	392	518	488	560	514	618	492
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	229	209	385	433	516	451	405	430
% 6+ Points	62	50	66	62	54	45	57	51

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

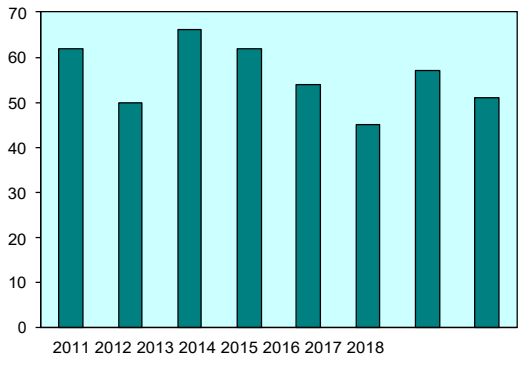


Figure 16. Brownlee Zone Elk Status and Objectives.

Pioneer Zone (GMUs 36A, 49, 50)

Historical Background

Elk abundance was low in Pioneer Zone through much of the twentieth century. These GMUs have been managed for decades under conservative controlled hunt strategies. As has occurred over much of the west, elk herds expanded dramatically since the mid-1970s. Today, the Pioneer Zone winters approximately 11,500 elk, up from an estimated 9,700 in 2013.

Following adoption of the dual-tag zone system in 1998 between 3,500 and 4,000 people have typically hunted in Pioneer Zone each year. However, hunting opportunity was reduced in 2009, following helicopter surveys that indicated declining bull numbers and bull:cow ratios that were below objectives. In 2009, hunter numbers declined, and approximately 1,800–2,000 people hunted the Pioneer Zone annually between 2009 and 2012. This number increased dramatically in 2013 to 3,300 hunters and increased to over 5,100 in 2017. Harvest has followed suit and has generally increased over the last 6–8 years. The controlled bull hunts in this zone have become very desirable; any-weapon permits are in high demand and difficult to draw. The area's reputation for mature bulls has also made this zone a very attractive archery hunt. The numbers of archery hunters has nearly tripled since 2010 to approximately 2,500 hunters. The percent of 6-point or larger bulls in the harvest increased 10% over the preceding 4 years.

Management Objectives

Objectives for Pioneer Zone (Figure 17) are to reduce this growing elk herd (about 3,150–5,600 cows and 1,125–1,820 bulls) to maintain herd productivity, minimize potential impacts on mule deer, and reduce private property depredations. This zone will continue to be managed to produce high bull:cow ratios (30–35 bulls:100 cows postseason) and many adult bulls (18–22 bulls ≥3 years old:100 cows).

Habitat Management and Monitoring

Cattle ranching, livestock grazing, and recreation are dominant human uses of the landscape in the Pioneer Zone. The zone is in a generally arid region where forage production can be strongly influenced by growing season precipitation. During drought years, high-elevation mesic habitats are more heavily utilized by elk while low-elevation riparian areas and wet meadows are more heavily utilized by cattle. Summer elk depredations on agricultural crops are common and are especially pronounced in dry years. Years with heavy snowfall see an increase in elk depredations to stored hay and cattle feed lines.

In some areas, elk winter in mature stands of mountain mahogany. Forests are slowly encroaching into shrub and grassland communities. Spread of noxious weeds, such as knapweed and leafy spurge, could ultimately have significant effects on winter range productivity.

Recent housing developments in the Big Wood River drainage in GMU 49 have severely reduced winter elk habitat. Continued development on remaining winter ranges will reduce elk carrying capacity in the GMU. Changes in land ownership in GMU 50 are making it difficult to manage depredation problems.

Biological Objectives

Elk numbers in the Pioneer Zone have increased since the mid-1970s and have continued to increase during the past decade. Recruitment measured through sightability surveys indicate most populations are reproducing at moderate to high levels (30–40 calves:100 cows). An aerial survey conducted in the Pioneer Zone during January 2008 indicated a ratio of 33 calves:100 cows based on observations of 1,139 calves and 3,448 cows. Bull:cow ratios were lower than in previous surveys at 25 bulls:100 cows (n = 845 bulls). Because of this, the spike hunt portion of the general A Tag elk hunt was eliminated throughout the zone in 2009. As a result, hunter numbers in the general hunt dropped from around 1,400 to around 900 in 2009.

An aerial survey conducted in the Pioneer Zone in 2013 indicated an increase in both the calf:cow ratio and bull:cow ratio, 39:100 and 37:100, respectively, with an estimate of 9,700 elk. The aerial survey conducted in the Pioneer Zone in 2017 estimated 11,500 elk, with calf:cow ratios and bull:cow ratios of 36:100 and 38:100, respectively.

Despite the continued absence of a spike hunt component to the general A tag, hunter numbers in the general hunt increased from about 900 hunters in 2009 to 2,500 in the last few years.

In GMUs 49 and 50, depredation issues have significantly increased both in the summer and winter months. Summer depredations on alfalfa have increased as animals have been staying at lower elevations throughout the year. In GMU 49, Landowner Permission Required hunts have helped reduce depredations. In 2015, a greenfield hunt in GMU 50 during August and September was included as part of the Pioneer A tag. This greenfield hunt was changed to August only in the 2017–2018 hunting regulations. Depredations in GMU 36A area limited to private land along the East Fork of the Salmon and the northern Tip of the GMU near Challis. Depredation complaints have remained relatively stable with the exception of the 2016–2017 winter. In response to the continued depredation issues across the zone and with the goal of bringing the herd back to within population objectives, the Commission approved the addition of a general season, any weapon, antlerless hunt during the 2019/2020 season setting process. This hunt will open November 1 and run through December 7, 2019 and 2020.

Capture and Radio-Telemetry

As part of the Department's elk population monitoring program, calves and cows are captured and fitted with radio collars in selected elk zones throughout the state. The Pioneer Zone is not typically part of this group. However, during the 2017–2018 reporting period, 4 cows were collared in GMU 36A to inform biologists about elk depredation behavior. Overwinter survival was 100% for the 4 cows.

Population Surveys and Monitoring

Sightability surveys are conducted periodically by elk zone to determine herd composition and derive a population estimate. These estimates are then compared to objectives outlined in the elk plan to determine what management direction is needed.

No sightability surveys were conducted in the Pioneer Zone during the reporting period.

Inter-specific Issues

Current high elk densities may be having some impact on wintering deer in portions of this zone.

When elk numbers are high, as they are currently, livestock operators often perceive elk as competing with livestock for range forage and impacting riparian areas. However, elk generally remove a minor portion of forage compared to livestock, and elk tend to use different habitats and different forage species than livestock.

Predation Issues

Black bear densities appear to be low and stable in Pioneer Zone. Mountain lion densities are low to moderate and appear to have increased in recent years, in part as a result of increased elk and deer densities. Coyotes are common, but do not impact elk populations. Wolves reintroduced by USFWS in central Idaho in 1995 are established in the Pioneer Zone. They have not become a significant factor in elk distribution and population demographics to date. Reports by hunters and observations by Department personnel suggest that wolf activity may have changed behavior patterns of elk in this area. There are several established wolf packs in the zone; however, due to the chronic livestock depredations, these wolves are often targeted for control actions.

Winter Feeding and Depredation

No Department-sponsored feeding facilities exist in this zone; however, artificial feeding of elk by private citizens in GMU 49 has occurred frequently over the past 20 years. Education measures undertaken to reduce this activity have been successful and are on-going.

Due to the severity of the 2016–2017 winter, the Department sanctioned 12 feed sites, and fed an estimated 1,200 elk in GMU 49. Additionally, about 500 elk were fed in 2 locations near Moore, ID in GMU 50. These feed sites were conducted to keep elk off cattle feed lines; reduce damage to stored hay, and to discourage elk from crossing or congregating near highways where they created public safety concerns. Winter snow conditions were the deepest observed in 25 years, and exceeded 36” throughout much of the zone. No winter feeding was conducted in GMU 36A.

An increased emphasis on protecting stored crops, via permanent stackyards, has been implemented in the GMUs 49 and 50 to reduce the future need to winter feed.

Hunting and Harvest Characteristics

Total harvest in the Pioneer Zone in 2018 was estimated at 1,760 elk based on the mandatory harvest report. This represents a 3% increase in harvest from the last 3 year average of 1,723. Total hunter numbers were 5,123 for 2018 compared to the past three-year average of 4,731 hunters from 2016–2018. Stemming from several years of increasing hunter numbers, hunter congestion issues have arisen in some portions of the zone, particularly GMU 50 which generally has the highest elk population density relative to 36A and 49. An average of 52% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger. The three-year average success rate on general hunts is 22% while controlled hunt success rate is 54%.

Disease Monitoring

Because elk were fed in GMU 49 during the winters of 2016 and 2017 in an attempt to alleviate elk-livestock interactions, the Department has implemented brucellosis surveillance program within the GMU. Currently all hunters who have a controlled antlerless or extra antlerless elk tag receive a brucellosis test kit. During the 2017 hunting season 2 elk tested sero-positive. We were unable to gather additional samples to confirm the sero-positive detections. No animals tested positive during this reporting period.

Management Discussion

Better information is needed to identify appropriate elk densities that will maintain optimum productivity and harvest while reducing depredations to growing and stored crops. A better understanding of elk movements and migration patterns across GMU boundaries would help season setting to address depredations and meet management objectives.

Elk depredation is a major concern in the Pioneer Zone. Landowner concerns are primarily focused on fence damage, loss of private and public rangeland forage, agriculture depredations, and elk-livestock interactions. Depredations that occur will be aggressively dealt with by the Department in a timely manner as specified in Idaho Code (36-1108) and Department policy. We will work closely with private landowners to avoid the development of chronic problems and will respond immediately to elk-livestock interactions. The Department places high management priority in responding to elk-livestock interactions particularly in GMU 49, and because of the 2 recent sero-positive brucellosis detections. The Department will continue the brucellosis surveillance program moving forward. Within GMU 49, 19 permanent stackyards have been built over the last 5 years to minimize stored crop depredations and elk-livestock interactions. Stackyards have been 100% effective in eliminating depredations on stored crops and the Department will continue to provide landowners with materials to construct stackyards. As a result, the volume of stored crop depredations will decrease over time.

The Department has commissioned a research project testing the effectiveness of deterrent treatments intended to modify elk behavior and subsequently reduce agriculture crop use. Realizing that land management alters the nutritional landscape and elk change behaviors to increase fitness benefits on this landscape, the Department wants to learn more about the behaviors of elk using agriculture landscapes and identify management tools that could be used to mitigate elk-agriculture conflicts. During the 2018 field season 6 elk were collared within the Pioneer Zone for this research. The results of this project will provide a better understanding of elk use in an agriculture landscape and how certain treatments may be used by wildlife managers and private landowners to address elk depredations.

Elk

Pioneer Zone (GMUs 36A, 49, 50)

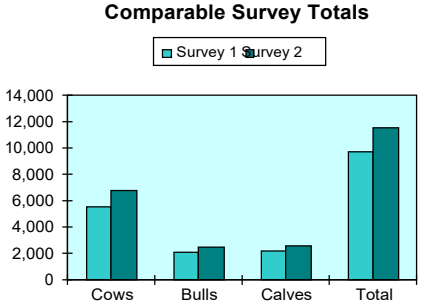
Square Miles =	3,202	3-Year Averages	
% Public Land =	82%	Hunters per square mile =	1.48
Major Land Type =	Rangeland	Harvest per square mile =	1.21
		Success Rate =	36%
		%6+ Points =	52%

Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2017	6,727	2,440	1,482	3,150-5,600	1,025-1,820	630-1,120
Bulls per 100 Cows			36	22		30 - 35	18 - 22

Population Surveys

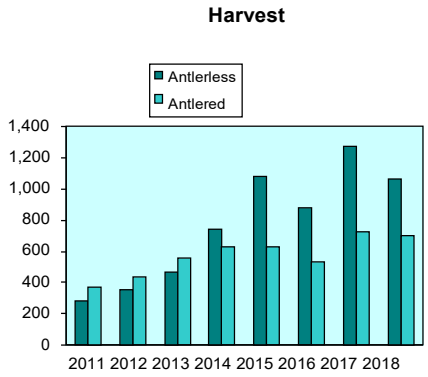
Survey 1						Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
36A	2013	2,028	909	711	3,648	2017	3,297	977	992	5,266
49	2013	1,648	494	579	2,721	2017	1,164	532	563	2,048
50	2013	1,868	642	859	3,369	2017	2,266	931	1,019	4,216
Comparable Surveys Total		5,544	2,045	2,149	9,738		6,727	2,440	2,574	11,530
Per 100 Cows			37	39				36	38	

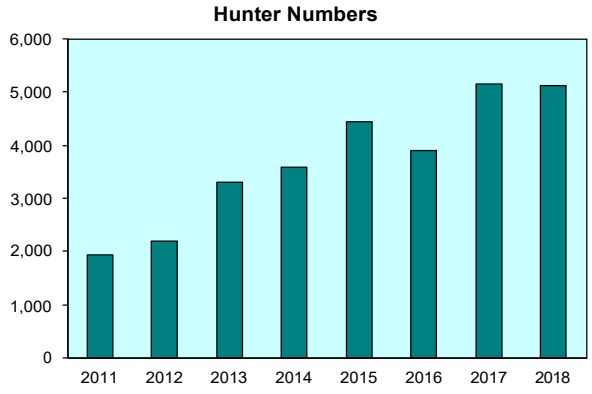


Zone Harvest Statistics

	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	280	357	465	737	1,074	881	1,272	1,060
'A' Tag	54	84	125	123	332	277	132	112
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	226	273	340	614	742	604	1,140	948
Antlered Harvest	371	437	554	626	626	530	727	700
'A' Tag	168	201	211	267	270	221	293	326
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	203	236	343	359	356	309	434	374
Hunter Numbers	1,942	2,203	3,311	3,594	4,440	3,911	5,158	5,123
'A' Tag	1,013	1,218	1,666	1,949	2,531	2,145	2,252	2,319
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	929	985	1,645	1,645	1,909	1,766	2,906	2,804
% 6+ Points	46	44	54	56	57	51	47	59

Note: % 6+ pts does not include spike-only harvest.





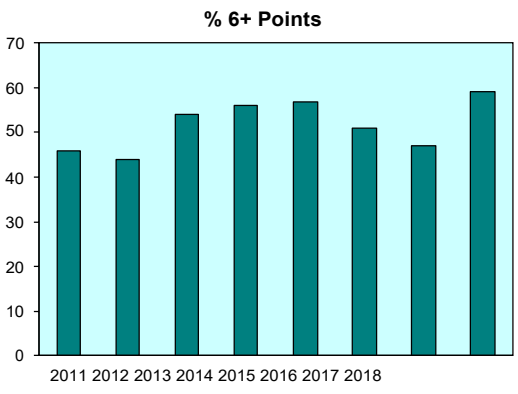


Figure 17. Pioneer Zone Elk Status and Objectives.

Smoky–Bennett Zone (GMUs 43, 44, 45, 48, 52)

Historical Background

Accounts from trappers and miners in the 1870s and 1880s indicate that elk occurred in the zone but were not as numerous as deer. Livestock grazing practices during the late 1800s and early 1900s severely damaged the Boise River and Big Wood River watersheds and reduced the area's ability to support elk. Additionally, heavy unregulated hunting by miners, market hunters, and local settlers drastically reduced big game populations during the late 1800s. By 1905, it was difficult to find camp meat. Elk were extirpated from Bennett Hills Zone by the early 1900s as a result of unregulated hunting and habitat depletion from livestock use. Elk observations were rare in the Boise River Basin and Big Wood River drainage.

In 1915, a reintroduction effort began with a release of elk from Yellowstone National Park into the Boise River drainage just above Arrowrock Dam. In 1930, the elk population in the Soldier Mountain area was estimated at 135 head. Reintroduction efforts continued in 1935 and 1936 with elk releases near Ketchum in the Big Wood River drainage. During the late 1940s, elk numbered less than 50 head in GMU 45 and less than 15 head in GMU 52. Elk populations increased steadily during the 1950s and 1960s, and controlled hunts were used to manage the harvest. In 1965, 36 elk (9 bulls, 19 cows, 9 calves) trapped in GMU 48 were released in GMU 52 about one mile south of Magic Reservoir. There were no elk seasons in GMU 45 from 1954–1963 and 1971–1978. GMU 52 was closed to all elk hunting from 1943–1978. Supplemental winter feeding of elk by the Department and private interests has occurred in this zone since the initial releases.

By the late 1970s, the population in GMUs 45 and 52 had increased to an estimated 235 head and depredation problems occurred on wheat and alfalfa fields from approximately 120 elk that summered in the Johnson Hill area. Early controlled firearms hunts and archery seasons were implemented in 1979 to reduce depredation concerns. In 1980, the management objectives were to reduce depredations and increase the elk population to 300 head. The 1986–1990 Elk Management Plan established a goal of about 400 elk for GMUs 45 and 52 combined. Since depredation problems were minimal and the elk population relatively small, aerial surveys were not conducted in Bennett Hills Zone until 1999 to monitor the elk population.

Throughout the 2000s, elk populations continued to grow in GMUs 44, 45, 48 and 52 and depredation issues, both during the summer and winter, increased. In 2014, based on personal observations and radio-collar information, the Smoky Mountain Zone and the Bennett Hills Zone were combined to form the Smoky–Bennett Zone to better reflect the entirety and current distribution and migration patterns of this elk population.

Management Objectives

Objectives in the Smoky-Bennett Zone (Figure 18) are to establish a population of 2,000–3,000 cows and 620–930 bulls, including 400–595 adult bulls, at ratios of 30–35 bulls:100 cows and 18–22 adult bulls:100 cows. The management objective was intended to balance depredation concerns in GMUs 44 and 45 and the desire to provide the maximum elk population the habitat can sustain. The adult bull objective was selected to maximize bull quality in controlled hunts

and provide sufficient adult bulls to sustain quality elk populations. Current bull:cow ratios are above objectives and the overall population has likely exceeded objectives.

Habitat Management and Monitoring

Primary spring, summer, and fall habitats throughout the zone are managed by the USFS, while winter ranges are a mixture of USFS, BLM, IDL, and private lands. Suitable winter ranges in GMUs 43, 44, and 48 are limited, and reintroduced elk did not learn or develop migration routes to lower-elevation sites. Because of this lack of winter range, nearly-annual supplemental feeding of elk occurred through the mid-2000s in GMU 43 to maintain populations at or near current levels.

In GMU 43, the South Fork Boise River corridor is crucial for the few elk that winter in the GMU. In GMUs 44, 45, and 52, much of the habitat elk might use during the winter is on private land, and depredations are a significant concern. Most of GMU 52 and the southern portion of GMU 45 are arid semi-desert dominated by exotic annual grasses like cheatgrass and medusa head. In GMU 48, most of the best winter habitat exists on private land in drainage bottoms near residential areas. A substantial loss of winter range to residential development has occurred in GMU 48, and continued loss of winter range is a serious concern as the human population in that area continues to grow.

Habitat productivity has probably improved on federal lands in recent years due to improved domestic livestock grazing strategies and re-growth of shrubs in areas where timber harvest has occurred. Additionally, several large wildfires in GMUs 43 and 48 have created openings in the forest and are currently being used by elk. However, suppression of fire throughout much of this century has likely resulted in declining elk habitat quality. Many aspen communities are decadent and/or are being replaced by conifer species and would benefit from mechanical and prescribed fire treatments. In portions of GMU 43, ponderosa pine-dominated communities would benefit from prescribed fire to reduce encroachment of Douglas fir. Spotted knapweed has become established in the zone and threatens habitat productivity and diversity in several localized areas.

For many years, depredations have been very limited in most of this zone, with the only real problems arising near urban areas where wintering elk find exposed horse hay or ornamental shrubs. However, over the past several winters, depredation complaints and claims have increased dramatically in GMUs 44, 45, 48, and 52. The Camas Prairie on the north side of the zone is dominated by private land used for pasturing livestock and growing grass, alfalfa hay, wheat, and barley. The presence of several radio-collared elk on the Camas Prairie and Bennett Hills during winter suggests that many elk have moved away from the historic feed sites along the South Fork Boise River and onto what was likely historic winter habitat in GMUs 44 and 45.

In GMU 43, high road densities from past timber harvest activities have increased elk vulnerability during hunting seasons (Appendix A). Seasonal road closures have been instituted by the USFS to increase elk escapement and mitigate for high road densities. Cross-country motorized travel on winter range in the Bennett Hills is of high concern. The 2011 Blair fire burned nearly 400,000 acres of Bennett Hills winter range. This fire removed the sagebrush canopy and afforded an opportunity for off-road vehicles to drive cross-country throughout most

of the area. The observed increase in off-road motorized traffic has been implicated in the displacement of elk onto private land, resulting in widespread depredations on standing and stored crops (i.e., corn, stored hay). Increased off-road use on winter range has also likely contributed to late winter and spring trampling of dormant agriculture crops (i.e., winter wheat and alfalfa) during spring thaws. Depredations in the Bennett Hills have decreased tolerance for elk on winter range in portions of the GMU. There is a need for the Department to work with the federal land management agencies to address winter recreational use on winter range during crucial times of the year for wildlife.

Biological Objectives

Elk populations have been increasing steadily since their reintroduction in the 1930s. Mild winters in the 1980s and early 1990s enhanced calf survival and increased population growth rates. Liberal antlerless harvest strategies throughout that period were used in an attempt to stabilize population growth.

Recently, data from sightability and herd composition surveys indicate that most populations are reproducing at sustainable levels (≥30 calves:100 cows). An aerial survey conducted in January 2009 indicated that overall elk numbers were below objective for GMUs 43, 44 and 48. Because of this, and because of the 2009 elimination of general any-weapon opportunity in the Pioneer Zone, hunters may have been displaced to these GMUs, the Smoky Mountain and Bennett Hills zone A tags were capped at 726 for the 2010–2013 hunting season.

The January 2009 sightability survey in GMUs 43, 44 and 48 resulted in estimates of 42 calves:100 cows and 32 bulls:100 cows based on a sample of 1,560 cows, 655 calves, and 502 bulls that were observed. Calf:cow and bull:cow ratios vary somewhat by GMU with bull:cow ratios as low as 26 bulls:100 cows in GMU 48 to 34 bulls:100 cows in GMU 43. Calf ratios range from 39 calves:100 cows in GMU 43 to 44 calves:100 cows in GMU 48. The 1999 sightability survey in GMUs 45 and 52 indicated that populations were reproducing at sustainable levels (24 calves:100 cows) and bull ratios were considerably higher than required to maintain the population (58 bulls:100 cows). In 2008, 927 elk were observed in GMUs 45 and 52 during a February mule deer survey. This number was much higher than expected, and prompted an aerial survey for elk in 2010. During the 2010 survey, 567 elk were observed, with 42 calves and 28 bulls per 100 cows (n = 333 cows, 140 calves, and 94 bulls). During 2010 and 2012 Bennett Hills deer and elk surveys, several elk radio-collared at South Fork Boise River feed sites were observed in GMU 45, suggesting that some elk that previously wintered in GMU 43 were now wintering in GMU 45. This relatively new migration was likely contributing to observed low winter survey numbers in the Smoky Mountain Zone. As a result of this information, the Smoky Mountain and the Bennett Hills zones were combined to form the Smoky–Bennett Zone in 2014.

In 2015 the newly formed Smoky-Bennett Zone was surveyed. The observed bull:cow:calf ratio was 36:100:43. Total cows, bulls, and adult bulls observed were near the upper limit of objectives. With elk populations growing in the zone, depredations, especially during the summer months, have drastically increased. The Department has implemented liberal antlerless hunting opportunity, and it is anticipated that increased tag allocations will continue for the next several years.

No elk have been fed along the South Fork Boise River in GMU 43 since 2009. Currently, very few elk winter in GMU 43 and most migrate to lower elevations in GMUs 39 (Boise River Zone) and 45.

Capture and Radio-Telemetry

The Department is currently implementing a comprehensive statewide elk mortality study which includes the Smoky-Bennett Zone. Cow and calf elk are fitted with radio collars to monitor survival rates, cause specific mortality, habitat use, and seasonal movements. In GMU 45, 10 calf elk and 41 cow elk were monitored during the 2018-19 winter. As of May 2019, calf and adult cow survival was 70% and 97% respectively.

Population Surveys and Monitoring

Sightability surveys are conducted periodically by elk zone to determine herd composition and derive a population estimate. These estimates are then compared to objectives outlined in the Elk Management Plan (IDFG 2014) to determine what management direction is needed.

No sightability surveys were conducted in the Smoky-Bennett Zone during this reporting period.

Inter-specific Issues

The zone supports a substantial population of mule deer, numerous moose, and, at higher elevations, mountain goats. The relationship between deer and elk is presently unclear but is not believed to be a significant issue in this zone. Historically, most elk remained at feed sites in GMU 43 during winter while most mule deer migrated to winter ranges in GMUs 45 and 52. Since the feed sites were decommissioned, elk are now wintering in the lower elevations of GMUs 45 and 52 creating the potential for competition with mule deer, particularly during periods of severe winter weather.

Cattle and domestic sheep have imposed the most significant forage demand in this zone since the 1870s. Excessive use by cattle and domestic sheep severely damaged watersheds in the late 1800s and early 1900s. Today, livestock use has been reduced to roughly 15% of historic use and competitive concerns remain but tend to be more localized.

Predation Issues

Black bear populations in the zone have remained relatively static over time. Mountain lion numbers probably increased in the late 1980s and early 1990s following increases in mule deer and elk populations and appear to remain at high levels. Wolves have become established in the zone and wolf activity may affect elk activity patterns and seasonal use areas, particularly during winter months. Radio-telemetry data has shown that many of the elk that traditionally wintered in the South Fork Boise River drainage have begun moving to lower-elevation winter habitat in GMUs 39, 44, 45, and 52. Wolves may have been a factor in prompting these new seasonal movement patterns; however, wolves are not considered a significant factor limiting elk populations in this zone. Wolf control actions are common throughout the zone due to domestic livestock depredations.

Winter Feeding and Depredation

Winter feeding of elk by private entities, particularly in the Big Wood River Valley (GMU 48), can be a contentious issue. During the 1990s and early 2000s, it was not unusual for 700–1,000 elk to be fed at up to 11 different private feed sites in GMUs 44 and 48. Over the last decade the Department has successfully worked with private feeders to eliminate nearly all private feed sites in the Wood River Valley.

Historically, the Department managed 4 Commission sanctioned feed sites in GMU 43. Feeding occurred at all or some of the sites in 3 of every 4 years. Since 2009, none of these feed sites have been active and all have been or are in the process of being decommissioned.

GMU 48 has one Commissioned sanctioned feed site in the Warm Springs Creek drainage. Upwards of 200 elk are fed at this site each winter. The feed site is not intended to sustain the population but rather to shortstop elk before they enter developed winter ranges in the town of Ketchum.

Hunting and Harvest Characteristics

Total harvest in the Smoky-Bennett Zone in 2018 was estimated at 1,316 elk based on the mandatory harvest report. This represents a 2% decrease in harvest from the previous 3 year average of 1,337. Total hunter numbers were estimated at 4,089 for 2018, 17% above the 3 year average of 3,450. An average of 57% of the bulls harvested during controlled hunts in these GMUs have been 6-point or larger with a 70% hunter success rate. Success rates for the past 3 years of general archery hunting have been around 16%.

Disease Monitoring

As part of the Department's statewide elk survival research all elk are tested for brucellosis. One adult cow collared in GMU 45 was sero-positive in 2018 and was euthanized by Department personnel. Culture samples collected by a USDA veterinarian were negative.

Management Discussion

More detailed information is needed on movement patterns of elk causing damage to agricultural crops to improve harvest management. In addition, population surveys, survival monitoring, and movement studies are important information we use to inform federal, state, and local land management decisions.

According to USDA's National Agriculture Statistics Bulletin, corn is being planted in Idaho at an increasing rate. In 2006, 270,000 acres of corn were planted statewide. By 2017 corn production had increased 26% to 340,000 acres. The increase in corn acres has changed the agriculture landscape and elk are adapting to this resource rapidly. The Department has been responding to an increasing number of elk depredations in corn. As a result, claims paid for corn depredation have increased substantially, particularly in GMUs 45 and 52.

Due to the widespread increase in elk depredations throughout southern Idaho, the Department has commissioned a research project testing the effectiveness of deterrent treatments intended to modify elk behavior and subsequently reduce agriculture crop use. Realizing that land

management alters the nutritional landscape and elk change behaviors to increase fitness benefits on this landscape, the Department wants to learn more about the behaviors of elk using agriculture landscapes and identify management tools that could be used to mitigate elk-agriculture conflicts. In 2018 and 2019, 47 elk were radio collared in the Smoky-Bennett Zone for this research. The results of this project will provide a better understanding of elk use in an agriculture landscape and how certain treatments can be used by wildlife managers to address elk depredation.

The Bennett Hills is one of the most important winter ranges for elk in the Magic Valley Region. There is a need for improved monitoring of winter range condition and trends. Antler shed hunting has become extremely popular in the Bennett Hills. There is concern that shed-antler hunters using motorized vehicles to travel cross-country are displacing elk onto private property. Additionally, private landowners are experiencing increased trespass incidents and vandalism to private roads, gates, and fences. The Bennett Hills are slated for an updated travel management plan in the near future that will focus on seasonal management of motorized and non-motorized use.

The growing radio telemetry dataset from collared elk within the region is currently being used for the statewide Integrated Population Model (IPM). The telemetry data is also being used to identify key highway crossing areas and migration corridors for elk. U.S. Highway 20 which connects Blaine and Camas counties with Mountain Home and Boise has been identified as a hot spot for wildlife-vehicle collisions, and as such, will be receiving greater attention for prioritizing mitigation efforts of roadway mortalities.

Habitat conversion is an overarching concern on both summer and winter ranges in portions of the Smoky-Bennett Zone. Fire suppression and in some cases livestock use, has caused a general decline in the health of aspen communities as stands become more decadent and/or are being replaced by conifers. Winter ranges, primarily in GMUs 45 and 52, were once dominated by sagebrush-grass communities with a moderate bitterbrush component. Decreasing quality of winter ranges due to establishment of invasive plant species that are of little to no forage value for elk, and increasingly common, high intensity fires that propagate the spread of invasive plant species, particularly medusahead rye and cheatgrass, present a serious concern to the future health of the habitat. Rehabilitation and protection of these very important winter ranges will require careful long-term planning that will maintain adequate winter forage for elk.

Conservation easements and/or acquisition of private lands in strategic locations would also help increase or maintain winter carrying capacity for elk. Currently, private interests own or control access to important summer and fall habitats in GMUs 44 and 45. This has been a subject of much concern by hunters unable to gain access to areas they wish to hunt. On the other hand, timber harvest and associated road-building activities was historically prevalent in portions of GMU 43. Access regulation will continue to be an important issue for deer and elk management.

Elk

Smoky Bennett Zone (GMUs 43, 44, 45, 48, 52)

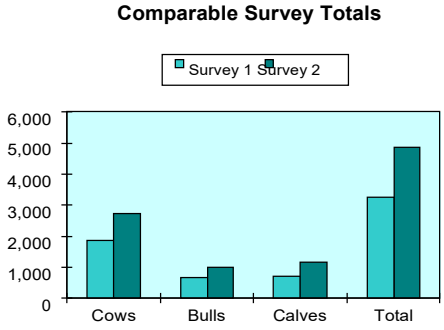
Square Miles =	3,982	3-Year Averages	
% Public Land =	72%	Hunters per square mile =	1.01
Major Land Type =	Rangeland	Harvest per square mile =	0.68
	Agriculture	Success Rate =	33%
		%6+ Points =	57%

Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2015	2,712	986	649	2,000-3,000	620-930	400-595
Bulls per 100 Cows			36	24		30 - 35	18 - 22

Population Surveys

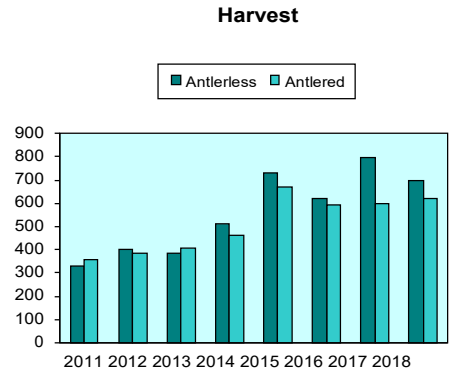
Survey 1						Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
43,44,48	2009	1,560	502	655	2,717	2015	1,331	481	582	2,394
45,52	1999	300	175	73	548	2015	1,381	505	591	2,477
Comparable Surveys Total		1,860	677	728	3,265		2,712	986	1,173	4,871
Per 100 Cows			36	39				36	43	

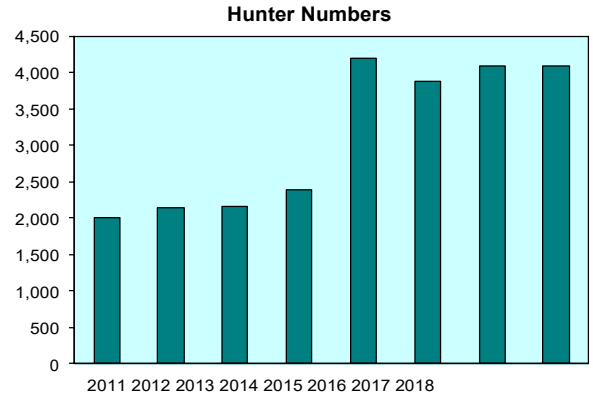


Zone Harvest Statistics

	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	331	401	385	512	730	622	797	697
'A' Tag	63	73	70	21	46	28	35	41
'B' Tag	0	0	0	61	23	42	18	12
CH Tag	268	328	315	430	661	552	744	644
Antlered Harvest	359	385	408	460	668	594	599	619
'A' Tag	116	124	132	152	350	285	149	184
'B' Tag	0	0	0	3	0	0	0	0
CH Tag	243	261	276	305	318	309	450	435
Hunter Numbers	2,007	2,146	2,157	2,391	4,191	3,871	4,088	4,089
'A' Tag	807	863	895	672	1,849	1,808	1,329	1408
'B' Tag	0	0	0	171	158	112	81	71
CH Tag	1,200	1,283	1,262	1,548	2,184	1,951	2,678	2610
% 6+ Points	45	53	55	52	48	48	65	58

Note: % 6+ pts does not include spike-only harvest.





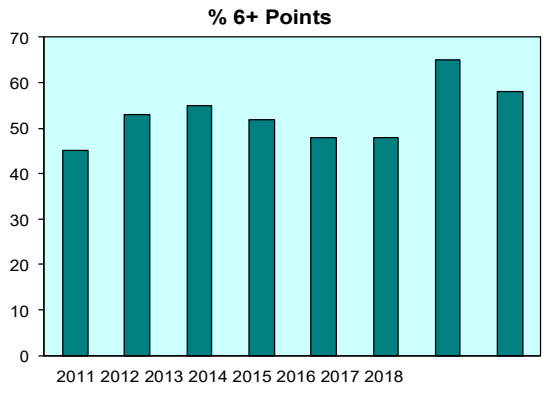


Figure 18. Smoky-Bennett Zone Elk Status and Objectives.

South Hills Zone (GMUs 46, 47, 54, 55, 56, 57)

Historical Background

During the late 1800s, elk in South Hills Zone were nearly eliminated because of unrestricted hunting and conflicts with the area's growing livestock industry. Elk densities remained low throughout the twentieth century but began to increase in the 1990s.

Efforts by the Nevada Division of Wildlife (NDOW) to reestablish elk in the northern portion of that state have been very successful. Elk are expanding their range into suitable habitats in Nevada and Idaho that have not had resident elk for nearly a century. Translocations in Nevada have been used to hasten the growth in elk numbers. Since the mid-1980s, 523 elk have been released into 5 areas in northern Nevada (Elko County). The overall Nevada population in 2002 was estimated to be 2,260 head with a management cap of 4,480 elk. Currently, approximately 5,000 Nevada elk winter in Idaho, primarily on the Diamond A in GMU 41 and the Inside Desert of GMU 46. Large elk herds (250–300) have also been noted wintering in Shoshone Basin and south of Murtaugh in GMU 54. More elk are residing year-round in Idaho and elk distribution is expanding.

As per the 2014 –2024 Idaho Elk Management Plan, the Owyhee and South Hills Zone were split into 2 elk management zones to better address management issues in the 2 zones, respectively. In 2014, GMU 56, which was previously in the Bannock Zone, was included into the South Hills Zone.

Elk numbers in the South Hills Zone GMUs were very low throughout the 1900s. Elk sightings were considered uncommon and management emphasized providing quality mule deer hunting opportunities. In 1916, the Department reintroduced 19 elk (17 cows, 2 bulls) into GMU 54. Following the release, elk numbers increased only slightly. In 1950, there were approximately 60 elk wintering in GMU 54. Hunting seasons were authorized from 1963 –1966 (5 –15 tags) but were discontinued because of low success. In 1990, the Magic Valley RMEF chapter proposed releasing elk into GMU 54 to establish a larger, huntable resident elk population. Since ingress of elk from Utah and Nevada was beginning to occur at that time, it was decided to allow elk numbers to increase naturally without translocations. Although reliable estimates of elk numbers are currently unavailable, the population in GMUs 46, 47, 54, 55, and 57 in 2002 was estimated between 250 and 350 elk, exceeding the 1998 objective. Elk hunting was authorized in GMUs 46, 47, and 54 in 2002 with 15 either-sex archery tags, 15 any-weapon antlered tags, and 15 any-weapon antlerless tags. Similar hunting seasons were authorized from 2003 through 2005 with the antlerless hunt tag level increased from 15 to 40 tags.

Because these GMUs have not traditionally been managed to maintain a resident elk population, the Department scoped 3 possible management scenarios with the public between December 2001 and February 2002. These scenarios were 1) do not allow an elk population to become established; 2) allow slow, carefully monitored growth of the elk herd to allow timely and effective responses to issues or conflicts that might arise; and 3) maximize elk population growth. Of the 230 people surveyed on the issue, 7% favored Scenario 1, 52% favored Scenario 2, and 41% favored Scenario 3. Hunters overwhelmingly favored the establishment of a resident elk population. Ranchers were split between Scenarios 1 and 2 and expressed concerns

about the potential for elk to compete with livestock for forage on public and private grazing lands.

The Department has allowed elk populations to increase within the South Hills Zone. Due to significant pressure from private landowners, the Department opened a zone wide, 5 month 'B' tag "greenfield hunt". During the first year of this hunt, harvest numbers were very high and during public scoping for 2015 seasons, both landowners and sportsmen strongly supported reducing the season from 5 months, to one month (1 August–29 August). As elk populations in Nevada and Utah and resident herds in Idaho continue to grow, the Department anticipates that harvest will need to be increased to manage depredation issues on private land. Currently the number of wintering elk in Idaho, particularly in GMUs 54 and 56, appears to be increasing which has resulted in private property depredation on stored (i.e., hay), standing (i.e., corn) and dormant (i.e., winter wheat) crops. Recommendations to reduce winter depredations and wintering elk numbers have been developed and will be evaluated following implementation in 2019.

The South Hills Zone is characterized by open country with moderate to high road densities. Elk permit levels have generally been low to ensure a quality hunt (i.e., low hunter densities, good opportunity to harvest mature bulls). With expanding elk populations, antlerless permit levels will need to be adjusted accordingly, but conflicts with too many hunters in open environments will need to be addressed. Excessive competition and unethical hunter behavior is often seen when large groups of elk are pursued in open country. Maintaining a quality hunting experience for trophy bull elk while increasing antlerless harvest will continue to be a top management priority in the future. As depredations continue to rise from resident herds building a dependence on agriculture, the Department will work with landowners to mitigate damages on private lands.

Increases in winter and spring time recreational activities on federal land within the South Hills Zone have been implicated in the displacement of elk onto private land, resulting in widespread depredations on agriculture crops near winter range. Displacement results in late winter and spring trampling of dormant agriculture crops (i.e., winter wheat and alfalfa) during spring thaws. Depredations in the South Hills have decreased tolerance for elk on winter range in portions of the GMU 54. There is a need for the Department to work with the federal land management agencies to address winter and early spring recreational use on winter range during crucial times of the year for wildlife.

Management Objectives

The objective in South Hills Zone (Figure 11) is to provide high-quality hunting opportunities commensurate elk population status. These elk populations will be stabilized or decreased in an effort to manage private property damage complaints at or below 2014 levels. Antlered harvest management will continue to emphasize the opportunity to harvest a mature bull.

The 6 GMUs within this zone vary substantially in their potential to sustain elk populations under current biological and socio-political constraints. Management will retain enough flexibility to allow adjustments of elk numbers to address issues that may arise.

Habitat Management and Monitoring

Elk habitat type and quality in the South Hills Zone varies considerably between GMUs, as does the potential for depredation. The USFS and BLM manage most of the elk habitat in the South Hills Zone. Habitat conditions in large portions of the zone are currently suitable for supporting substantially higher numbers of elk. A large amount of sagebrush, bitterbrush, and mountain shrub-dominated habitats in GMUs 46, 47, 54, and 57 preferred by mule deer have been altered by fire, improving elk habitat suitability. However, high road densities, the open character of habitat, and depredations are important issues that will ultimately help determine elk management objectives.

Biological Objectives

Because elk densities have traditionally been low in this zone, surveys have not been conducted to provide data on population dynamics. Elk objectives are not derived from aerial surveys due to expansive land area, dispersed groups of elk, poorly defined winter range, difficult winter access, and interstate migratory patterns. However, Nevada Department of Wildlife (NDOW) conducts annual winter surveys and routinely fly wintering elk herds in GMUs 41, 46, and 47.

Anecdotal information, the number of depredation complaints, and NDOW aerial surveys support the premise these populations are increasing, but accurate estimates of population size are unavailable. Increases in elk numbers over the next 5–10 years are inevitable from natural reproduction and continued ingress of elk from Nevada. Although elk numbers in some GMUs currently exceed population objectives established in 1998, no major biological issues have been identified. However, elk impacts to mule deer and bighorn sheep ranges are concerns that biologists will continue to monitor.

Capture and Radio-Telemetry

As part of the Department's elk population monitoring program, calves and cows are captured and fitted with radiocollars in selected elk zones throughout the state. The South Hills Zone is not part of this program although the deployment of radio collars in the zone would help define seasonal movement patterns and habitat use. The Department provided NDOW with 5 radio collars which were deployed on elk wintering in Idaho.

Population Surveys and Monitoring

Sightability surveys are conducted periodically by elk zone to determine herd composition and derive a population estimate. These estimates are then compared to objectives outlined in the elk plan to determine what management direction is needed.

No sightability surveys were conducted in the South Hills Zone during the reporting period. NDOW counted approximately 5,000 elk in GMUs 41 and 46 in January 2017. The winter of 2016-17 produced the highest recorded snowfall in 25 years. Conversely, the winter of 2017-18 was mild and only 2,200 elk were counted by NDOW in Idaho.

Inter-specific Issues

The South Hills Zone has traditionally maintained a large population of mule deer. However, deer numbers have declined from levels observed in the early 1990s due to changes in habitat caused by wildfire, exotic annual grass proliferation, and the effects of drought and severe winters. The current elk population is not believed to have an impact on mule deer.

In 2016, NDOW observed 3,900 elk wintering on the Diamond A in GMU 41, and many elk were noted in the Bruneau and Jarbidge River canyons. The impact of elk on bighorn sheep is unknown, but is a concern for biologists.

Cattle and domestic sheep have imposed the most significant forage demand in this zone since the 1870s. Use by cattle and domestic sheep severely damaged watersheds in the late 1800s and early 1900s. Today, livestock use has been reduced to roughly 15% of historic use and competitive concerns remain but tend to be more localized.

Landowner concerns regarding elk in the South Hills Zone include fence damage, loss of private and public rangeland forage, and agriculture depredations. Depredations that occur will be aggressively dealt with by the Department in a timely manner as specified in Idaho Code (36-1108) and Department policy. The Department will work closely with private landowners to avoid development of chronic problems. On federal lands, any resource damage attributed to elk will be jointly evaluated by the Department and managing agency.

Predation Issues

Mountain lion is the primary predator of elk in this zone. Predation is presently not a major factor limiting growth of these elk populations, nor is it anticipated to become a concern.

Winter Feeding and Depredation

The South Hills Zone has no history of supplemental winter-feeding. Elk numbers will not be maintained at a higher level than can be supported by available winter habitat. Unsanctioned feeding by private individuals will be strongly discouraged. In the event that emergency feeding is necessary, elk populations will be reduced to resolve the problem.

Harvest Characteristics

Total harvest in the South Hills Zone in 2018 was estimated at 423 elk based on the mandatory harvest report. This represents a 10% increase in harvest from 2017 (385) and is 27% above the previous three-year average of 333. Total hunter numbers were estimated at 1,288 for 2018 compared to 1,208 hunters for 2017. An average of 83% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger. The three-year average success rate on general hunts is 15% while controlled hunt success rates are around 44%.

Disease Monitoring

Annual CWD surveillance has occurred in Idaho at hunter check stations since 1997, with 16,000+ cervids (mule deer, white-tailed deer, elk, and moose) sampled from

around the state. No samples were collected from elk in this zone in 2018. Currently CWD has not been detected in Idaho.

Management Discussion

Elk population estimates in the South Hills Zone are lacking, and primarily based on data from NDOW (GMUs 46 and 47) and anecdotal reports from ranchers, biologists, and hunters. More accurate data will be needed as elk numbers increase. In addition, information is needed on the seasonal movement patterns of elk causing damage to agricultural crops. This information will help improve harvest management strategies.

According to USDA's National Agriculture Statistics Bulletin, corn is being planted in Idaho at an increasing rate. In 2006, 270,000 acres of corn were planted statewide. By 2017 corn production had increased 26% to 340,000 acres. The increase in corn acres has changed the agriculture landscape and elk are adapting to this resource rapidly. The Department has been responding to an increasing number of elk depredations in corn, particularly in GMUs 46 and 56. As a result, claims paid for corn depredation have increased substantially.

Due to the widespread increase in elk depredations throughout southern Idaho, the Department has commissioned a research project testing the effectiveness of deterrent treatments intended to modify elk behavior and subsequently reduce agriculture crop use. Realizing that land management alters the nutritional landscape and elk change behaviors to increase fitness benefits on this landscape, the Department wants to learn more about the behaviors of elk using agriculture landscapes and identify management tools that could be used to mitigate elk-agriculture conflicts. In 2018, 40 elk were radiocollared in and around agriculture landscapes in southern Idaho for this research. The results of this project will provide a better understanding of how elk use an agriculture landscape and how certain treatments can help wildlife managers and private landowners address elk depredations.

Hunter crowding, trespass, off-road vehicle use, and private property damage has become a concern on Black Pine Mountain in GMU 57 during the general archery season. The Idaho Fish and Game Commission has provided direction to the Department to evaluate hunter crowding and develop strategies to address the issue throughout the State. In the interim, Department staff will increase our presence in the Black Pine area during the archery season to help manage hunter behavior.

Elk

South Hills Zone (GMUs 46, 47, 54, 55, 56, 57)

Square Miles =	6,640	3-Year Averages	
% Public Land =	67%	Hunters per square mile =	0.17
Major Land Type =	Rangeland	Harvest per square mile =	0.11
	Agriculture	Success Rate =	32%
		%6+ Points =	83%

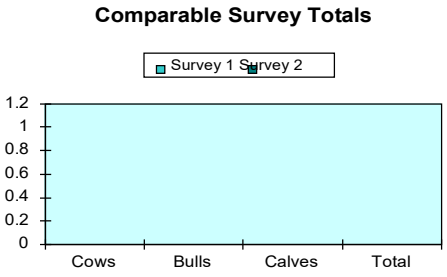
Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
Bulls per 100 Cows							

Population Surveys

Survey 1						Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
Comparable Surveys Total										
Per 100 Cows										

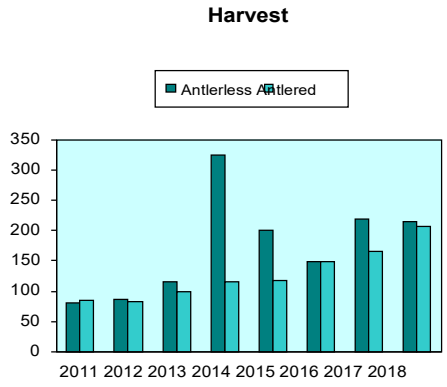
Note: ND = no survey data available.

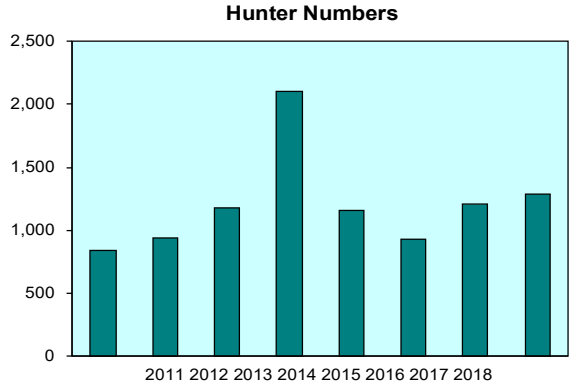


Zone Harvest Statistics

	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	81	86	116	325	200	148	219	216
'A' Tag	22	31	26	15	10	3	2	19
'B' Tag	0	0	0	270	66	39	2	7
CH Tag	58	58	90	40	124	106	215	190
Antlered Harvest	85	83	99	116	118	148	166	207
'A' Tag	9	17	16	45	30	46	41	59
'B' Tag	0	0	0	0	2	0	0	0
CH Tag	75	65	83	71	86	102	125	148
Hunter Numbers	839	943	1,175	2,101	1,157	931	1,208	1,288
'A' Tag	551	641	570	361	424	348	434	470
'B' Tag	0	0	0	1,395	217	129	24	28
CH Tag	297	318	605	345	516	454	750	790
% 6+ Points	76	82	78	80	86	82	84	83

Note: % 6+ pts does not include spike-only harvest.





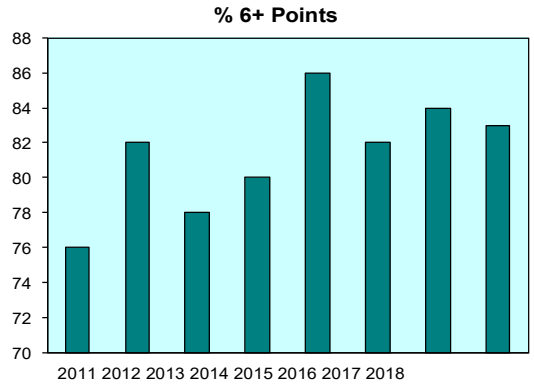


Figure 19. South Hills Zone Elk Status and Objectives.

Big Desert Zone (GMUs 52A, 68)

Historical Background

The elk population in the Big Desert Zone has increased substantially from early historical records. Accounts of trappers through this area in the mid-1800s suggest that, although elk were common, buffalo, bighorn sheep, and pronghorn were far more numerous. Unregulated harvest of the late 1800s and early 1900s likely reduced populations to relatively low levels.

Elk hunting in the Big Desert Zone began in 1983 with 30 either-sex tags for GMU 63. Since that time, elk numbers and tag numbers have increased substantially. In 2001, the Big Desert Zone was restructured from 6 GMUs (52A, 53, 63, 63A, 68, 68A) to 2 GMUs (52A, 68). Between 2001 and 2007, all elk tags in the Big Desert Zone were issued on a controlled hunt basis. Beginning in 2008, an archery-only general elk hunt was authorized in this zone.

Management Objectives

The objective for the Big Desert Zone (Figure 20) is to reduce elk populations. Elk depredation on standing and stored crops is an important issue in this zone. As agricultural crop and property damage have increased, so have antlerless tag numbers. Hunter success has remained high in the Big Desert Zone. Where agricultural concerns are manageable, elk numbers will be maintained at levels which limit agricultural damage. As with other zones limited by agricultural impacts, the overall goal is to strike a balance between being responsive to depredation issues while still providing hunting opportunity.

Habitat Management and Monitoring

The Big Desert Zone represents some of the least productive habitat found in eastern Idaho. Comprised of mostly dry desert shrub habitat types, this zone provides limited summer range for elk.

The BLM administers the majority of public ground (67% of total area) in the Big Desert Zone. Private ground makes up 24%, state endowment lands 4%, and other federal agencies (National Park Service, USFWS, Department of Energy, etc.) make up about 5%.

A number of water guzzlers have been developed zone primarily for nongame, upland game, and pronghorn within the Big Desert Zone. Although the impacts to other wildlife are unknown, elk have permanently damaged some guzzlers which can prematurely dry up storage tanks. Many of the guzzlers on federal land have fallen into disrepair and are being removed.

Wildfires continue to play a major role with habitat throughout the Big Desert Zone. In many cases, fire has removed sagebrush and much of the public land has been reseeded to crested wheatgrass or invaded by cheatgrass and other invasive plants, theoretically improving seasonal habitat conditions for elk.

Biological Objectives

With the exception of a few Idaho National Laboratory (INL) aerial surveys generally covering the northeast corner of the zone, population surveys have not been conducted in the Big Desert Zone. Therefore, estimates for recruitment and total numbers are based on other data.

Over the past few years, depredation issues have increased in portions of GMU 52A. Because of this, a new antlerless general hunt capped at 500 tags has been implemented to target depredating elk. Close monitoring of elk depredations will continue, and additional hunts may be implemented or amended to address this issue. With the addition of this new general hunt, the extra antlerless controlled hunts were removed.

In 2017 the archery hunt in GMU 68 was extended to include the month of August in an attempt to alleviate chronic depredation issues and limit agricultural damage along agriculture desert interface.

Capture and Radio-Telemetry

As part of the Department's elk population monitoring program, calves and cows are captured and fitted with radio collars in selected elk zones throughout the state. The Big Desert Zone is not part of this program.

Population Surveys and Monitoring

Sightability surveys are conducted periodically by elk zone to determine herd composition and derive a population estimate. These estimates are then compared to objectives outlined in the elk plan to determine what management direction is needed.

No sightability surveys were conducted in the Big Desert Zone during the reporting period.

Inter-specific Issues

Livestock, mule deer, and pronghorn are the primary ungulates sharing range with elk in the Big Desert Zone. We are unaware of significant concerns regarding elk competition for forage with livestock. It is unknown what, if any, impacts an increasing elk population may have on pronghorn or mule deer.

Predation Issues

Coyotes are the dominant predators within this zone. However, they are not believed to be a significant factor in elk population dynamics.

Winter Feeding and Depredation

Emergency supplemental feeding of elk has not been conducted recently. The relatively inaccessible nature of this zone in winter and generally limited snowfall preclude many concerns for winter feeding. Because of the lack of historical wintertime depredations, many hay producers leave their stacks unprotected on the edge of the desert. This may have created a few small bands of wintering elk that remain on the desert and rely on those stacks for supplemental forage. This trend was most noticeable during the 2016–2017 winter when heavy snowfalls

drove animals off of the desert and created several haystack depredations. This is a situation that will need to be monitored in the future.

Hunting and Harvest Characteristics

Total harvest in the Big Desert Zone in 2018 was estimated at 182 elk based on the mandatory harvest report. This represents a 9% increase in harvest from the previous three-year average of 167. Total hunter numbers were estimated at 525 for 2018 compared to 517 hunters for the previous three-year average. An average of 66% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger. The three-year average success rate on general hunts is 17% while controlled hunt success rates are 44%.

Disease Monitoring

Annual CWD surveillance has occurred in Idaho at hunter check stations since 1997, with 16,000+ cervids (mule deer, white-tailed deer, elk, and moose) sampled from around the state. Currently CWD has not been detected in Idaho.

Because elk were fed in a neighboring GMU (49) during the winters of 2016 and 2017 to alleviate elk-livestock interactions, the Department has implemented a brucellosis surveillance program in GMU 52A. Currently all hunters who obtain a landowner permission hunt tag receive a brucellosis test kit. Part of the hunt boundary for the landowner permission hunt in 49-1X includes that portion of GMU 52A in Blaine County within the Little Wood, Fish Creek, and Huff Creek drainages. During the 2018 surveillance period no sero-positive animals were detected in GMU 52A.

Management Discussion

The greatest data need for the Big Desert Zone is reliable population data that provide estimates of abundance, composition, and recruitment and distribution. This information would assist in developing effective harvest and depredation control strategies.

According to USDA's National Agriculture Statistics Bulletin, corn is being planted in Idaho at an increasing rate. In 2006, 270,000 acres of corn were planted statewide. By 2017 corn production had increased 26% to 340,000 acres. The increase in corn acres has changed the agriculture landscape and elk are adapting to this resource rapidly. The Department has been responding to an increasing number of elk depredations in corn, including GMU 52A. As a result, claims paid for corn depredation have increased substantially.

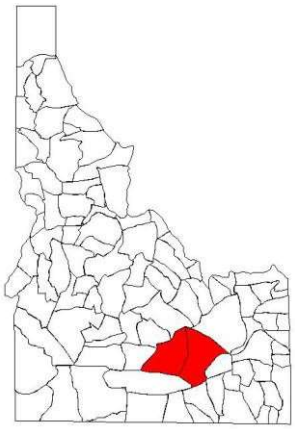
Due to the widespread increase in elk depredations throughout southern Idaho, the Department commissioned a research project in 2018 to test the effectiveness of treatments intended to modify elk behavior and subsequently reduce agriculture crop use. Realizing that land management alters the nutritional landscape and elk change behaviors to increase fitness benefits on this landscape, the Department wants to learn more about the behaviors of elk using agriculture landscapes and identify management tools that could be used to mitigate elk-agriculture conflicts. During the 2018-19 field seasons 40 elk were radio collared in the Pioneer, Big Desert, Smoky-Bennett, and Weiser zones for this research. The results of this project will

provide a better understanding of elk use in an agriculture landscape and how certain treatments may be used by wildlife managers and private landowners to address elk depredations.

Elk

Big Desert Zone (GMUs 52A, 68)

Square Miles =	3,553	3-Year Averages	
% Public Land =	80%	Hunters per square mile =	0.14
Major Land Type =	Range	Harvest per square mile =	0.10
	Agriculture	Success Rate =	33%
		%6+ Points =	63%



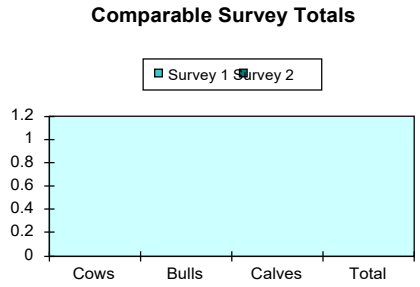
Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
Bulls per 100 Cows							

Population Surveys

Survey 1						Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
52A	ND					ND				
68	ND					ND				
Comparable Surveys Total										
Per 100 Cows										

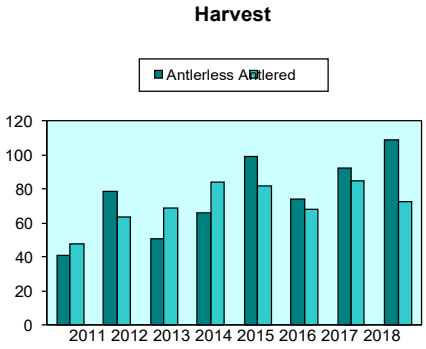
Note: ND = no survey data available.

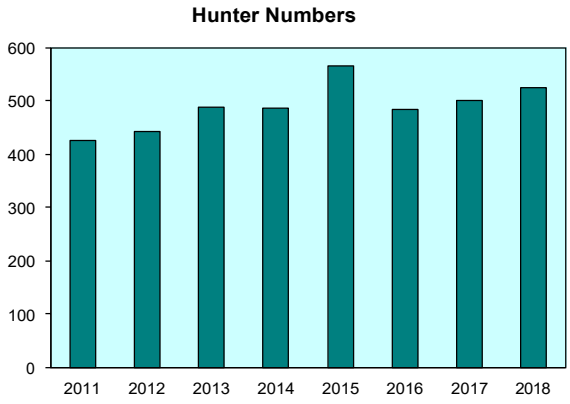


Zone Harvest Statistics

	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	41	79	51	66	99	74	92	109
'A' Tag	3	5	3	6	6	0	5	9
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	38	74	48	60	93	74	87	100
Antlered Harvest	48	64	69	84	82	68	85	73
'A' Tag	10	13	23	32	24	31	30	22
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	38	51	46	52	58	37	55	51
Hunter Numbers	425	444	489	487	567	483	500	525
'A' Tag	105	116	159	145	199	173	157	179
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	320	328	330	342	368	310	343	346
% 6+ Points	64	62	57	54	73	65	59	65

Note: % 6+ pts does not include spike-only harvest.





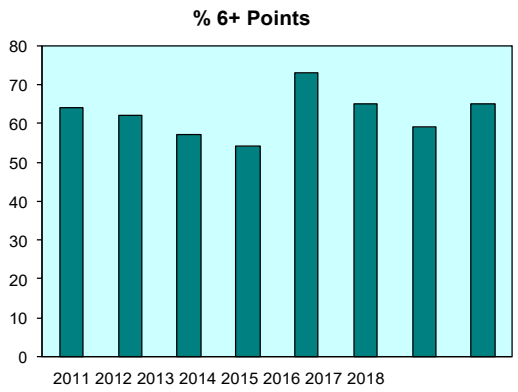


Figure 20. Big Desert Zone Elk Status and Objectives.

Snake River Zone (GMUs 53, 63, 63A, 68A)

Historical Background

The elk population in the Snake River Zone has increased substantially from early historical records. Accounts of trappers throughout this area in the mid-1800s suggest that, although elk were common, buffalo, bighorn sheep, and pronghorn were far more numerous. It is likely that the unregulated harvest of the late 1800s and early 1900s reduced populations to relatively low levels.

The Snake River Zone (GMUs 53, 63, 63A, 68A) was previously part of the Big Desert Zone (GMUs 52A and 68) from the beginning of the zone system in 1998. In 2001 the Big Desert Zone was reorganized and a group of GMUs were removed to form the Snake River Zone.

Elk hunting in the Snake River Zone began in 1983 with 30 either-sex tags for GMU 63. Since that time, elk numbers and harvest opportunity have increased substantially.

Depredation-related issues regularly occur in parts of this zone as irrigated agricultural lands draw elk out from the surrounding arid desert habitat. These issues have influenced the structure of several hunts in the Zone that were created to address elk depredations through long, antlerless and either sex seasons. While depredation issues surrounding Camas National Wildlife Refuge seem to have decreased in the past couple years, elk depredations continue to be an issue, particularly throughout much of GMU 63. This coupled with ongoing trespass issues on private and Idaho National Laboratory lands and enforcement challenges associated with large, highly visible groups of elk in highly accessible areas led the Commission to approve a hunt structure change as a part of the 2019-2020 season setting cycle. GMU 63 was removed from the general season Snake River Zone tag and moved to 2 controlled hunts for the 2019 hunting season.

Management Objectives

The management objective for the Snake River Zone (Figure 21) is to decrease the elk population to a level commensurate with private property depredations. No population survey estimate exists for this zone.

Habitat Management and Monitoring

The Snake River Zone represents some of the least suitable elk summer habitat found in eastern and southern Idaho. Comprised of mostly irrigated agriculture and dry desert shrub habitat types, the Snake River Zone provides limited summer range for elk.

The BLM administers the majority of public ground in the Snake River Zone. Other primary ownership includes private and Department of Energy/Idaho National Laboratory (INL) lands. The INL, which is largely non-hunted, provides daytime refuge for several hundred elk that forage on private cropland at night. Efforts will continue to improve management options available to the Department for elk on INL.

A number of water guzzlers have been developed primarily for nongame, upland game, and pronghorn within the Snake River Zone. Although the impacts to other wildlife are unknown, elk

have permanently damaged some guzzlers which can prematurely dry up storage tanks. Many of the guzzlers on federal land have fallen into disrepair and are being removed.

Wildfires continue to alter large swaths of habitat throughout the Snake River Zone. Vast expanses of sagebrush habitat has been lost to fire and replaced with non-native annual and perennial grasses. Large fires have become nearly an annual occurrence in portions of the zone. Post wildfire perennial grass seedings have potentially improved habitat conditions for elk.

Biological Objectives

With the exception of a few INL aerial surveys, population surveys have not been conducted in the Snake River Zone. Therefore, estimates for recruitment and total numbers are based on other data. Given the relatively rapid increase in elk observed over the last 15 years, it is believed that production is high. In recent years, depredation issues have increased in portions of GMU 53 near the border of GMU 52A. Recruitment rates are likely high in the Snake River Zone, so meeting the management objective will require high harvest rates.

Capture, Radio-mark, and or Telemetry

No capture, radio-mark, or telemetry activities were conducted during this reporting period.

Population Surveys and Monitoring

No population survey or monitoring activities were conducted during this reporting period.

Inter-specific Issues

Livestock, mule deer, and pronghorn are the primary ungulates sharing the range with elk in the Snake River Zone. We are unaware of significant concerns regarding elk competition for forage with livestock. It is unknown what, if any, impacts an increasing elk population may have on pronghorn or mule deer.

Predation Issues

Coyotes are the predominant large predator within this zone. However, they are not believed to be a significant factor in elk population dynamics.

Winter Feeding and Depredation

Emergency supplemental feeding of elk has not been conducted recently. The relatively inaccessible nature of this zone in winter and generally limited snowfall preclude the need for winter feeding. However, depredations continue to be a significant issue in this zone during both summer and winter months.

Hunting and Harvest characteristics

Total harvest in the Snake River Zone in 2018 was estimated at 372 elk based on the mandatory harvest report. This represents a 9% increase in harvest from 2017 (340) and is down compared to the previous three-year average of 407. Total hunter numbers were estimated at 1,613 for 2018

compared to 1,574 hunters for 2017. An average of 37% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 22% hunter success rate.

Disease Monitoring

No disease monitoring activities were conducted during this reporting period.

Management Discussion

The greatest data need for the Snake River Zone is reliable population data that provides estimates of abundance, composition, recruitment, and distribution. These data would aid in the development of effective harvest and depredation control strategies.

The Department commissioned a research project in 2018 to test the effectiveness of treatments intended to modify elk behavior and subsequently reduce agriculture crop use. Realizing that land management alters the nutritional landscape and elk change behaviors to increase fitness benefits on this landscape, the Department wants to learn more about the behaviors of elk using agriculture landscapes and identify management tools that could be used to mitigate elk-agriculture conflicts. During the 2018 field season 6 elk were collared within the Pioneer Zone for this research. The results of this project will provide a better understanding of elk use in an agriculture landscape and how certain treatments may be used by wildlife managers and private landowners to address elk depredations.

Elk

Snake River Zone (GMUs 53, 63, 63A, 68A)

Square Miles =	4,618	3-Year Averages	
% Public Land =	43%	Hunters per square mile =	0.34
Major Land Type =	Agriculture	Harvest per square mile =	0.18
		Success Rate =	24%
		%6+ Points =	37%

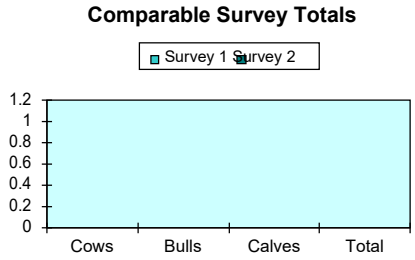
Winter Status & Objectives

Zone Total	Year	Current Status Cows	Bulls	Adult Bulls	Objective Cows	Bulls	Adult Bulls
Bulls per 100 Cows							

Population Surveys

GMU	Year	Survey 1 Cows	Bulls	Calves	Total	Year	Survey 2 Cows	Bulls	Calves	Total
Comparable Surveys Total										
Per 100 Cows										

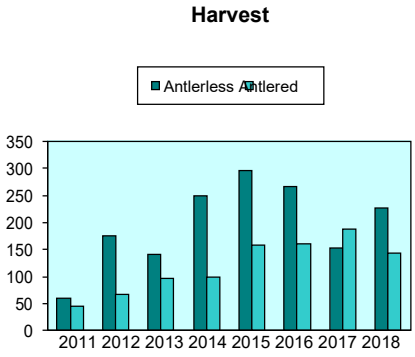
Note: ND = no survey data available.

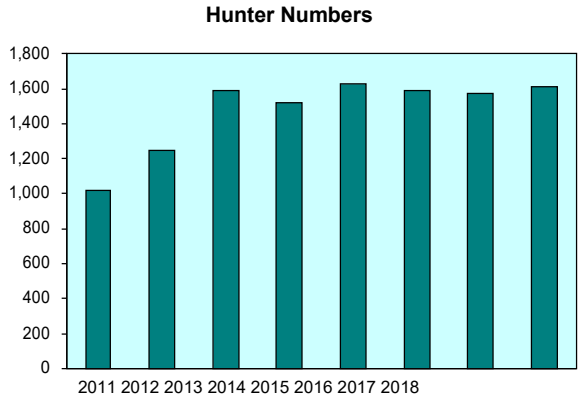


Zone Harvest Statistics

	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	60	174	140	248	296	265	152	228
'A' Tag	55	169	135	231	296	241	122	226
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	5	5	5	17	0	24	30	2
Antlered Harvest	45	66	97	100	159	161	188	144
'A' Tag	45	65	97	100	159	161	188	144
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	0	1	0	0	0	0	0	0
Hunter Numbers	1,018	1,249	1,591	1,524	1,624	1,591	1,574	1,613
'A' Tag	985	1,214	1,582	1,493	1,587	1,552	1,528	1,585
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	33	35	9	31	37	39	46	28
% 6+ Points	24	36	40	51	38	46	30	35

Note: % 6+ pts does not include spike-only harvest.





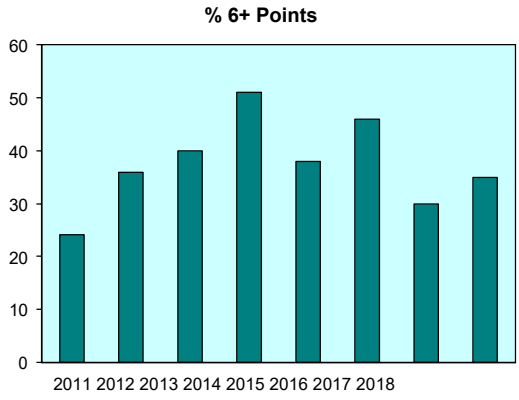


Figure 21. Snake River Zone Elk Status and Objectives.

Bannock Zone (GMUs 70, 71, 72, 73, 73A, 74)

Historical Background

According to the Pocatello Deer-Elk Herd Management Plan (1945), in the early 1900s, elk were not found in the area and "deer were a rarity." In 1916–1917, 35 elk were transported by train from Gardiner, Montana, and released west of Pocatello. Counts in the 1930s and 1940s found 500–600 elk. By 1950, elk were reported to be spreading into the Elkhorn Mountain and John Evans Canyon areas (GMU 73), Blackrock (GMU 71), and Crystal and Midnight creeks (GMU 70). In a 1940 report, Ted Trueblood said, "Elk (in this area) are a liability and a problem; deer would be an asset."

Elk hunts were first offered in the zone in 1933. Elk numbers declined in the 1950s, likely due to overharvest, and seasons were closed. Permit hunts were offered in some GMUs between 1962 and 1968. Populations remained at very low levels into the late 1980s. Since that time, elk have expanded throughout the Bannock Zone, but are generally found in small groups with a sporadic distribution.

Management Objectives

Objectives for Bannock Zone (Figure 22) are to maintain elk populations, hunter opportunity, and hunter success similar to current levels. Maintaining elk populations at levels which limit agricultural impacts will remain a priority. The Bannock Zone is one of few where aerial surveys are not conducted due to the large area and small dispersed groups of elk. Elk populations in this zone are managed through analysis of antlerless harvest and percent 6-point bulls in the harvest.

Habitat Management and Monitoring

The topography of Bannock Zone is characterized by low, north-south mountain ranges separated by broad valleys. Elevations range from 4,000–9,000 feet. Mountains support mixed conifer/aspen stands on north slopes and mountain brush/grass communities on southern exposures. Juniper and mountain mahogany are common on lower slopes. Valleys are agricultural with large expanses of grain, pasture, and hay. Grazing, logging, and urbanization are additional factors affecting habitat in the zone.

Land ownership is approximately 56% private, 31% federal, 6% state, and 7% Indian reservation. Access is widespread with few areas more than one mile from some type of road.

Winter range consists of windswept ridges, Conservation Reserve Program (CRP) acreage, and other agricultural fields. Depredation damage complaints from private landowners have been relatively stable.

Biological Objectives

Calf recruitment rates have not been measured in this zone. All incidental information indicates a productive herd. Newly colonizing populations without any known competition tend to have high recruitment rates.

Capture, Radio-mark, and or Telemetry

The Bannock Zone has not been a priority for monitoring elk survival with collars in the recent past. However, in January 2019 5 calves were collared in GMU 72. They were assumed to be Diamond Creek elk and when spring migration took place they confirmed the assumption and returned to Diamond Creek.

Population Surveys and Monitoring

Population surveys are not conducted in the Bannock Zone due to the large area and small dispersed groups of elk.

Inter-specific Issues

The concurrent increase in numbers of elk and decrease in mule deer on some winter ranges has raised concerns about possible competition for forage and/or social intolerance. Livestock operators in several areas have complained about increasing elk use of forage on public land grazing allotments and private lands.

Predation Issues

Mountain lions are the major natural predators of elk in the zone and are judged to be at moderate levels in most areas. However, expanding populations of elk do not indicate that predation is significantly impacting numbers. Coyotes are quite common but not believed to be a major predator of elk. Black bears exist at extremely low levels within the zone and, therefore, are not an important source of mortality for elk. There are no known wolf packs in the zone; however we receive the occasional public wolf observation report.

Winter Feeding and Depredation

During the winter of 2018–2019 winter feeding was approved for one site in the Bannock Zone in GMU 72. The feeding operation was initiated to prevent an elk-cattle interaction on winter range near the Soda Hills.

In August 2017, the Powerline fire burned over 30,000 acres in GMU 70 and appears to have caused elk distribution to shift, resulting in an increase in depredation complaints in GMU 70. These complaints continued during this reporting period. Additionally, a large herd of elk (~400) near Swan Lake (GMU 74) have been creating depredations and public safety hazards in the fall and winter months. Conflicts with landowners and concerns about public safety on roadways have increased during the past year. Staff is working with landowners in the area to increase public access and hunter harvest. Additionally, kill permits have been implemented to address conflicts. Elk depredations in the rest of the Bannock Zone have remained relatively stable.

Hunting and Harvest Characteristics

Total harvest in the Bannock Zone in 2018 was estimated at 443 elk based on harvest reporting. This represents a slight decrease in harvest from 2017 (467) after a steady increase since 2013. For the first time since 2013, cow harvest decreased, by 22%. Bull harvest has increased slowly since 2013, but has remained relatively constant with a three-year average (2016–2018) of 181.

Total hunter numbers were estimated at 1,929 for 2018 compared to 1,732 hunters for 2017. An average of 61% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger and the overall hunter success rate has averaged 25% (past 3 years).

Disease Monitoring

The Bannock Zone is outside of Idaho's Designated Surveillance Area (DSA) for brucellosis. However, the Bannock Zone is within one of 3 areas with focused brucellosis surveillance that rotates annually due to its proximity to the DSA. Additional brucellosis testing occurs opportunistically, particularly when the Department is organizing and implementing controlled or depredation hunts in winter when the potential for elk-cattle interactions is elevated.

During this reporting period kits were not sent to controlled or general season hunters in the Southeast Region. However, depredation hunters in the southeast region were provided with sampling kits when possible. Very few of these kits were returned, with no seropositive individuals.

The Department recently revised its chronic wasting disease (CWD) surveillance strategy. Because CWD has a higher probability of being detected in deer, the primary focus of the new surveillance strategy is focused on this species. However, any mortality from collared elk or elk displaying symptoms (i.e. suspect animals) of CWD is submitted for testing.

Management Discussion

Elk tags have been stable over the past 5 years. A greater level of precision in estimating elk numbers and population change (recruitment) would help in determining appropriate levels and types of hunting to help achieve population objectives.

Elk

Bannock Zone (GMUs 70, 71, 72, 73, 73A, 74)

		3-Year Averages	
Square Miles =	3,742	Hunters per square mile =	0.46
% Public Land =	32%	Harvest per square mile =	0.12
Major Land Type =	Rangeland	Success Rate =	25%
	Agriculture	%6+ Points =	61%

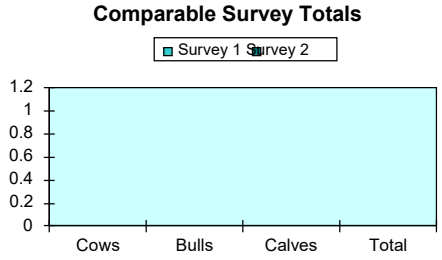
Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
Bulls per 100 Cows							

Population Surveys

Survey 1						Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
Comparable Surveys Total										
Per 100 Cows										

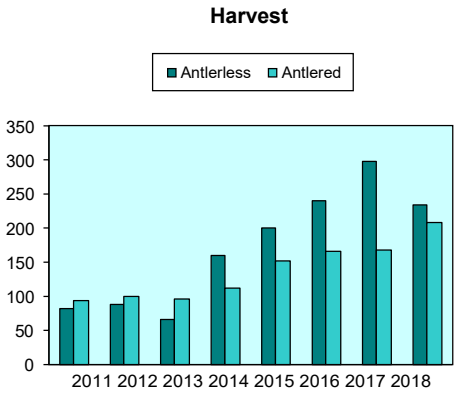
Note: ND = no survey data available.

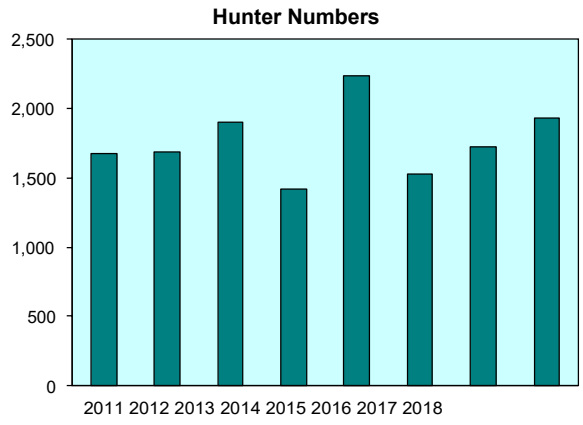


Zone Harvest Statistics

	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	83	88	67	160	201	240	298	235
'A' Tag	78	81	58	158	198	240	297	235
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	5	7	9	2	3	0	1	0
Antlered Harvest	94	101	97	113	152	167	169	208
'A' Tag	39	61	32	53	60	59	73	108
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	55	40	65	60	92	108	96	100
Hunter Numbers	1,672	1,688	1,901	1,422	2,242	1,532	1,722	1,929
'A' Tag	1,375	1,429	1,610	1,165	1,957	1,313	1,494	1,708
'B' Tag	0	0	0		0	0	0	0
CH Tag	297	259	291	257	285	219	228	221
% 6+ Points	55	59	60	60	56	57	67	59

Note: % 6+ pts does not include spike-only harvest.





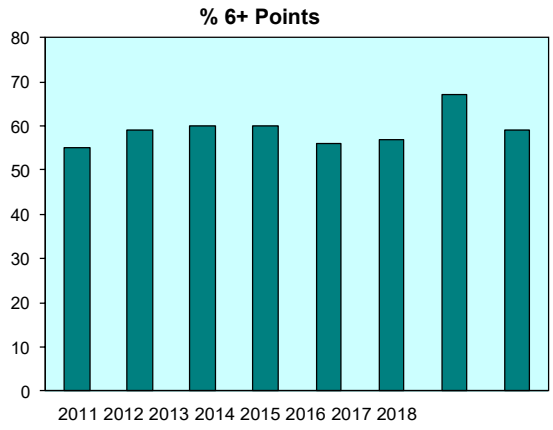


Figure 22. Bannock Zone Elk Status and Objectives.

Diamond Creek Zone (GMUs 66A, 76)

Historical Background

The elk population in Diamond Creek Zone has increased dramatically from early historical records. Accounts of trappers through this area in the mid-1800s suggest that although elk were common, buffalo and bighorn sheep were far more numerous. Undoubtedly, the unregulated harvest of the late 1800s and early 1900s maintained at or reduced populations to relatively low levels. By 1952, elk were believed to be numerous enough to warrant the first hunting season with 250 tags for either-sex elk in GMUs 66, 66A, and 69. An aerial survey of GMU 76 during February 1952 resulted in 193 elk observed with a total population estimate of 230. Elk in GMU 66A are primarily migratory and winter with elk in GMUs 66 and 69. The first hunt in GMU 76 began in 1964 with 75 either-sex tags.

As the elk population grew, so did hunting opportunity. Although this zone has primarily been managed via controlled hunt tags, several general hunting seasons have occurred since regulated harvest began. Between 1955 and 1959, general hunts were held in GMUs 66, 66A, and 69 varying between a three-day antlered-only to a 10-day either-sex season. Again in 1968 and 1969, nine-day antlered-only general seasons were offered. The last general any-weapon hunting opportunity in GMU 66A occurred in 1975 with a three-day antlered-only season. Since that time, GMUs 66A and 76 have had a myriad of varying controlled hunts and tag levels along with a general either-sex archery season. Extra antlerless tags were used beginning in 2005 to address public safety and depredations concerns. These hunts occurred in December and January on private lands, but following an aerial survey in 2013, extra tags were eliminated. Most recently, during the 2016–2017 seasons, controlled and extra antlerless muzzleloader only opportunities on private lands were added to address increasing depredation concerns.

In 2009, archery hunters were reduced from an average of 2,100 per year to a fixed number of 1,836 per year, with 40% of these tags allocated to non-residents. At the same time, controlled antlerless tags were reduced and split between GMUs. In 2013, the non-resident allocations on the capped archery tags were reduced from 40% to 35%, adding 5% of the capped tags back into the resident pool.

Management Objectives

Objectives for Diamond Creek Zone (Figure 23) are to maintain a wintering elk population of 1,500–2,200 cows and 488–715 bulls, including 315–462 adult bulls. Limited amounts of suitable winter range in GMU 66A preclude significant increases in the wintering population for that GMU. The most recent aerial survey (2018) indicates a significant increase in this elk population.

Habitat Management and Monitoring

Diamond Creek Zone represents some of the most productive habitat found in southeastern Idaho. Three main vegetation types predominate: sagebrush-grassland, aspen, and conifer. Past habitat-use research indicates that aspen habitat types are highly preferred, especially during non-snow periods. Fire suppression efforts and intensive livestock grazing in the past have resulted in increased shrub and conifer cover with a reduction in the aspen component since historical times.

Approximately 65% of the land in Diamond Creek Zone is publicly owned, primarily USFS. The 35% private land is used for rangeland pasture and small grain and hay production. Depredation complaints have generally increased in the last decade. The predominate land uses of the publicly-owned ground include livestock grazing, timber management, recreation, and phosphate mining. Approximately 35% of the known U.S. reserves of phosphate ore are located in Diamond Creek Zone.

Open habitat types combined with moderate road densities (0.7–2.3 miles/square mile) and, in some cases, unrestricted ATV travel result in a relatively high vulnerability standard for elk in Diamond Creek Zone.

The Diamond Creek Zone has rich veins of elemental phosphate within its boundaries. This has been and continues to be a habitat concern given the number of forested tracks converted into grassland, and the number of mines in operation and that will be created over the next 30 years. Additionally, the impact of elk feeding on these sites with high selenium concentrations in the forage is not entirely understood.

Biological Objectives

Current winter population objectives (Figure 23) for Diamond Creek Zone are outlined in Idaho's elk management plan (2014–2024). The most recent aerial survey (2018) indicated that this population is over objective for both cows and bulls. Calf:cow ratios (36:100 in 2018), as measured during aerial surveys, indicate a healthy, productive herd in Diamond Creek Zone. High calf:cow ratios are consistent with growing populations that are not heavily influenced by density-dependent factors . Given these high levels of recruitment and increases in total population, relatively high harvest rates of antlerless elk are necessary to stabilize populations. Additionally, liberal bull harvest rates can be sustained by high recruitment rates.

Capture, Radio-mark, and or Telemetry

Elk in Diamond Creek zone have periodically been monitored using collar data from adult females and 6 month old calves to better understand specific aspects of these populations. Biological information is then collected from these individuals to answer questions related to survival, movement, body condition, pregnancy, and habitat use. These data provide managers with valuable information to better inform management decisions.

During the 2018–2019 reporting period, the Department monitored 54 adult female elk and 25 calf elk in Diamond Creek zone. Apparent overwinter survival of adult females was 94% and 86% for calves. There were no adult males monitored in the Diamond Creek Zone during this reporting period.

Population Surveys and Monitoring

The first sightability survey for elk in Diamond Creek Zone occurred in 2005. Additional repeated surveys occurred in 2009, 2013, and most recently in 2018. These surveys are conducted the same year as Tex Creek Elk Zone (GMUs 66 and 69) because of migrations across

zones. Future plans include the continuation of Zone-wide sightability surveys, as specified by the current elk management plan.

In January 2018, staff completed a sightability survey in Diamond Creek Zone. The population estimate was 4,251 elk, a significant increase from the estimated 2,352 elk during the 2013 survey. The resulting calf:cow:bull ratios were 36:100:36.

Inter-specific Issues

Although both livestock and elk numbers within Diamond Creek Zone are high, there appears to be little concern by livestock operators of competition for grass. However, localized concerns do exist for livestock over utilization during dry years with drought conditions and on ridge-tops (primarily sheep utilization) used by wintering elk.

During the mid-1900s, GMU 76 supported a high population of mule deer with relatively few elk. Important mule deer wintering areas included Brown's Canyon to Yellowjacket Creek, east of Henry, Stump Creek, Crow Creek, and the Soda Front from Wood Canyon to Dingle. Today, these winter ranges are predominately occupied by elk. It is unknown whether habitat changes and/or competition (resource or social intolerance) have led to this change. However, there appear to be areas with suitable deer winter range vegetation that are only occupied by elk.

Predation Issues

Potentially major predators of elk in Diamond Creek Zone include black bears and mountain lions. The black bear population is extremely low and probably has remained unchanged for many years. Mountain lions are believed to have increased during the last 30 years. However, current recruitment rates and other elk population parameters suggest this increased mountain lion population is not having a significant effect. Coyotes are common but not believed to be a significant predator on elk. There are no known wolf packs in the zone, however wolves have been observed in the zone and public wolf observation reports are not uncommon.

Winter Feeding and Depredation

Emergency supplemental feeding of elk has occurred sporadically during winters since 1981 in Diamond Creek Zone. Numbers of animals fed have ranged from 200–900. Recurrent emergency feeding areas include near Freedom, Thomas Fork Valley, Crow Creek, Stump Creek, Banks Valley and Bischoff Canyon. Additionally, it is believed that some elk summering in this zone migrate to annual winter feed grounds in adjacent Wyoming. During 1985, 122 elk were trapped near Stump Creek and translocated elsewhere. On-site testing for Brucellosis resulted in no positive responses. However, during 1992–1993, a group of 300 wintering elk in Idaho and Wyoming along the Thomas Fork Valley were trapped and marked in Wyoming. One out of the 40 elk tested showed a positive Brucellosis response. During the severe 2016–2017 winter there were 5 feed sites authorized for elk that served about 900 animals. Deep crusted snow, public safety, and depredation concerns were responsible for these feed sites being authorized.

Depredations occur in summer, fall, and winter mainly on alfalfa, with some damage occurring on grain fields by trampling and bedding. Most landowners in chronic depredation areas have erected permanent stack yards to protect stored crops, with more being constructed each year.

Hunting and Harvest Characteristics

Total harvest in the Diamond Creek Zone in 2018 was estimated at 1082 elk based on the mandatory harvest report. This was an increase in harvest from 2017 (929) and is higher than the three-year average of 981. Total hunter numbers were estimated at 3091 for 2018 compared to 3072 hunters for 2017. An average of 50% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 35% hunter success rate.

Disease Monitoring

The very northeastern corner of GMU 66A is within Idaho's Designated Surveillance Area (DSA) for brucellosis. The Diamond Creek Zone is within one of 3 areas with focused brucellosis surveillance that rotates annually. Additional brucellosis testing occurs opportunistically, particularly when the Department is organizing and implementing winter controlled or depredation hunts when the potential for elk cattle interactions is elevated.

During this reporting period kits were not sent to controlled or general season hunters in the Southeast Region. However, depredation hunters in the Southeast Region were provided with sampling kits when possible. Very few of these kits were returned, with no seropositive individuals.

The Department recently revised its chronic wasting disease (CWD) surveillance strategy. Because deer are the most likely cervid to contract the disease, much of the new surveillance strategy is focused on this species. However, any mortality from collared elk or elk displaying symptoms (i.e. suspect animals) of CWD is submitted for testing.

Management Discussion

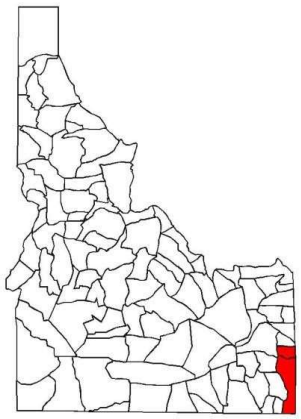
Recently (during the mid to late 2000s), observed changes in winter distribution of elk in the Diamond Creek Zone has occurred, and reasons for these shifts are poorly understood. Possible explanations include a population that has reached habitat fill, habitat change resulting in less suitable winter range, and/or random behavioral response to differing environmental conditions. A better understanding of the processes involved in winter range selection would aid in a better ecological understanding of elk in this zone and lead to more responsive management actions.

The Diamond Creek Zone continues to be an extremely popular area for archery hunting because of higher than average hunter success rates and elevated percentages of 6+ points in the harvest. Currently, there is growing interest surrounding the effectiveness of archers as technological advancements improve. It will be essential that the Department continues to obtain accurate and timely harvest estimates in Diamond Creek for effective management and maintaining adequate opportunities for both archery and any-weapon sportsmen..

Elk

Diamond Creek Zone (GMUs 66A, 76)

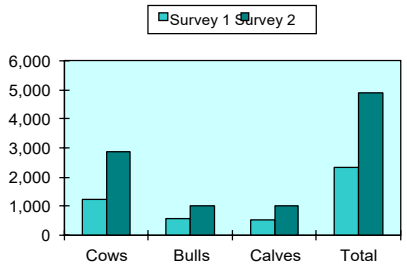
Square Miles =	1,659	3-Year Averages	
% Public Land =	60%	Hunters per square mile =	1.82
Major Land Type =	Forest	Harvest per square mile =	1.21
		Success Rate =	32%
		%6+ Points =	53%



Winter Status & Objectives

	Current Status				Objective		
Zone	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
Total	2018	2,862	1,018	708	1,500-2,200	488-715	315-462
Bulls per 100 Cows			36	25		30-35	18-22

Comparable Survey Totals



Population Surveys

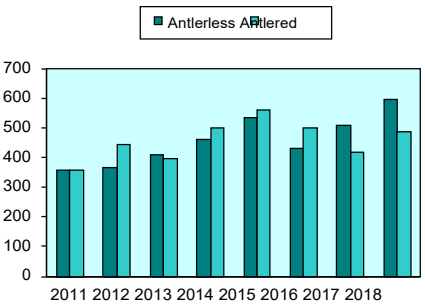
	Survey 1					Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
66A,76	2013	1,218	583	534	2,335	2018	2,862	1,018	1,017	4,897
Comparable Surveys Total		1,218	583	534	2,335		2,862	1,018	1,017	4,897
Per 100 Cows			48	44				36	36	

Zone Harvest Statistics

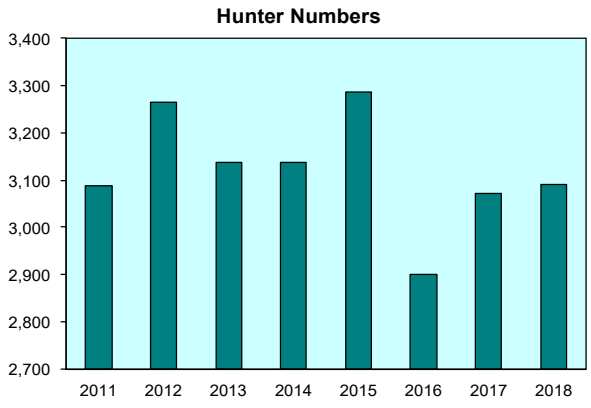
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	358	364	408	460	534	433	511	594
'A' Tag	70	54	87	96	92	109	67	131
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	288	310	321	364	442	324	444	463
Antlered Harvest	357	442	397	499	562	500	418	488
'A' Tag	237	285	234	303	346	312	270	301
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	120	157	163	196	216	188	148	187
Hunter Numbers	3,088	3,266	3,136	3,137	3,286	2,899	3,072	3,091
'A' Tag	1,673	1,836	1,745	1,755	1,848	1,600	1,697	1,718
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	1,415	1,430	1,391	1,382	1,438	1,299	1,375	1,373
% 6+ Points	28	54	43	48	55	55	55	50

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

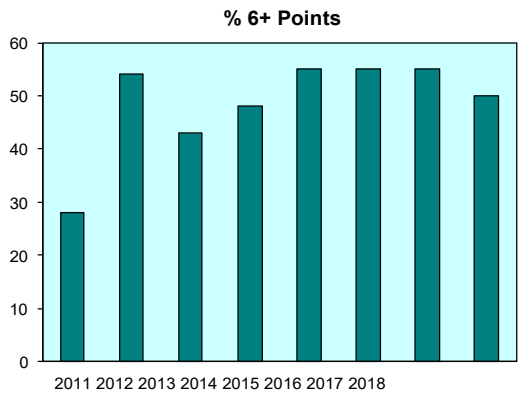


Figure 23. Diamond Creek Zone Elk Status and Objectives.

Bear River Zone (GMUs 75, 77, 78)

Historical Background

The elk population in the Bear River Zone has increased substantially from early historical records. Accounts of trappers through this area in the mid-1800s suggest that although elk were common, buffalo and bighorn sheep were far more numerous. Undoubtedly, the unregulated harvest of the late 1800s and early 1900s maintained at or reduced populations to relatively low levels.

Elk hunting in this zone began in the 1940s with controlled either-sex hunts, was then closed for several years, and reopened again in 1956 with general hunts for either-sex. GMU 75 was closed on and off through the 1960s. From 1968 through 1975, all GMUs were open to general either-sex hunting. Starting in 1976 through the present, all GMUs have been open for general antlered-only opportunity. In 1984 and 1985, a few either-sex tags were offered along with the antlered-only hunt. Since 1986, antlerless-only tags have generally increased.

In 2013 the general Bear River Zone B tag (general any weapon bull hunt) was capped at a quota of 550 tags. These tags were available to residents and non-residents on a first come first serve basis. For comparison, in 2012 there were 646 B tags sold, accounting for 132 bulls harvested.

Prior to the late 1970s, the vast majority of elk that summered in this zone wintered in Utah. Since that time, elk wintering in this zone have dramatically increased.

Management Objectives

Objectives for the Bear River Zone (Figure 24) are to maintain a wintering elk population of 400–700 cows and 84–147 bulls, including 48–84 adult bulls. Although this zone could support a higher wintering population, it would be at the expense of elevated depredation concerns. The most recent aerial survey (2017) indicates that the population has increased since 2010 with substantial increases in total and adult bulls.

Habitat Management and Monitoring

The Bear River Zone represents some of the highest quality habitat found in southeastern Idaho. Three main vegetation types predominate: sagebrush-grassland, aspen, and conifer. Past habitat-use research indicates that aspen habitat types are highly preferred, especially during non-snow periods. Fire suppression efforts and/or intensive livestock grazing in the past have resulted in increased shrub and conifer cover with a reduction in the aspen component since historical times.

The USFS administers the majority of public ground (49% of total area) in this zone. Predominant land uses of public ground include livestock grazing, timber management, and recreation. Private ground makes up the remaining 51% and is used primarily for rangeland pasture and small grain and hay production. Since most of the potential elk winter range is privately held or adjacent to agriculture, depredation concerns have been significant. Several stackyards have been installed in order to alleviate some of the depredation concerns. The urban sprawl of subdivisions and small-acreage home-sites in this zone has also led to significant conflicts with wintering elk. The loss of winter range and conflicts with producers are the primary considerations limiting elk populations in the Bear River Zone.

Because of the extensive conifer cover, the Bear River Zone represents some of the best security cover found in southeastern Idaho. Increased use of ATVs and increases in road development will raise vulnerability to harvest in this zone.

Biological Objectives

Current winter population objectives (Figure 24) for the Bear River Zone are outlined in Idaho's elk management plan (2014–2024). The most recent aerial survey (2017) indicated that this population is within objective for cows and over objective for bulls. Calf:cow ratios, as measured during aerial surveys, increased from 34:100 in 2010 to 44:100 in 2017. A rate of approximately 25 calves per 100 cows during early winter is necessary to maintain elk populations and allow moderate levels of harvest. The 2017 aerial survey estimates and calf:cow ratios indicate that the Bear River elk herd may be increasing. The reduction of the any weapon B tags also seems to have resulted in increased bull numbers throughout the zone.

Capture, Radio-mark, and or Telemetry

In January 2018, Utah Division of Natural Resources (DNR) captured 14 adult female elk in the Bear River Zone as part of a project between Idaho, Utah, and Wyoming to understand elk movements and disease risk. Each elk was fitted with a GPS collar to monitor movement and survival. This is the first GPS collar data in the Bear River Zone and will help managers understand interstate movements of this elk population.

Population Surveys and Monitoring

The first sightability survey for elk in the Bear River Zone occurred in 2006. Additional repeated surveys occurred in 2010 and 2017. Future plans include the continuation of Zone-wide sightability surveys, as specified by the current elk management plan.

In January 2017, staff completed a sightability survey in the Bear River Zone. The population estimate was 1,307 elk, a significant increase from the estimated 909 elk during the 2010 survey. The resulting calf:cow:bull ratios were 44:100:48.

Inter-specific Issues

The elk population in this zone has caused conflict with several livestock operations in the foothills. The main sources of concern are damage to fences and loss of hay, grain, and private rangeland forage.

The Bear River Zone is also provides highly productive mule deer habitat. However, recent habitat changes may be favoring elk. Although these GMUs do show some niche separation during winter between elk and deer, recent observations indicate that elk are beginning to occupy suitable deer winter range.

Predation Issues

Potential predators of elk in the Bear River Zone include black bears and mountain lions. The black bear population is extremely low. Mountain lions are believed to have increased during the

last 30 years. However, current recruitment rates and other elk population parameters suggest this increased mountain lion population is not having a significant effect. Coyotes are common but not believed to be a significant predator on elk. Occasional wolf observation reports in the zone do occur, but there are no known established wolf packs.

Winter Feeding and Depredation

Emergency winter feeding of elk only occurs periodically in this zone. An unknown but substantial number of elk are believed to migrate and winter in Utah, with some known to use the feeding operation at Hardware Ranch. The winter of 2018–2019 was moderate, resulting in some wintertime depredation and springtime elk-cattle interactions near Grace, Cub River, and Nounan. Staff completed multiple permanent stack yards and paneled haystacks in our chronic depredation areas to keep elk from getting into haystacks at these locations.

Hunting and Harvest Characteristics

Total harvest in the Bear River Zone in 2018 was estimated at 398 elk based on harvest reports. This represents a slight decrease in harvest from 2017 (405) and is above the three-year average of 383. Total hunter numbers were estimated at 1,734 for 2018, compared to 1,762 hunters for 2017. An average of 40% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 22% hunter success rate.

Disease Monitoring

The Bear River Zone is outside of Idaho's Designated Surveillance Area (DSA) for brucellosis. However, the Bear River Zone is within 1 of 3 areas with focused brucellosis surveillance that rotates annually due to its proximity to the DSA. Additional brucellosis testing occurs opportunistically, particularly when the Department is organizing and implementing winter controlled or depredation hunts when the potential for elk-cattle interactions is elevated.

During this reporting period kits were not sent to controlled or general season hunters in the Southeast Region. However, depredation hunters in the southeast region were provided with sampling kits when possible. Very few of these kits were returned, with no seropositive individuals.

The Department recently revised its chronic wasting disease (CWD) surveillance strategy. Because CWD has a higher probability of being detected in deer, the primary focus of the new surveillance strategy is focused on this species. However, any mortality from collared elk or elk displaying symptoms (i.e. suspect animals) of CWD is submitted for testing.

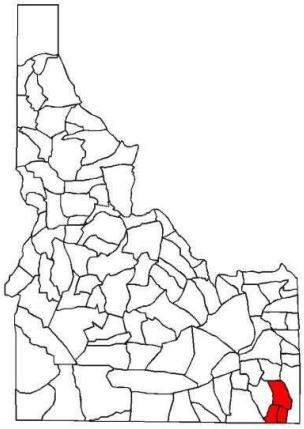
Management Discussion

An unknown but substantial number of elk are believed to migrate and winter in Utah. A better understanding of these numbers would benefit management recommendations.

Elk

Bear River Zone (GMUs 75, 77, 78)

Square Miles =	887	3-Year Averages	
% Public Land =	52%	Hunters per square mile =	1.96
Major Land Type =	Forest	Harvest per square mile =	0.84
		Success Rate =	22%
		%6+ Points =	40%



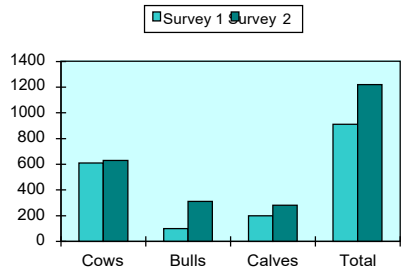
Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2017	630	314	183	400 - 700	84 - 147	48 - 84
Bulls per 100 Cows			50	29		25-29	14-18

Population Surveys

	Survey 1					Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
	2010	606	98	205	909	2017	630	314	278	1,222
Comparable Surveys Total		606	98	205	909		630	314	278	1,222
Per 100 Cows			16	34				50	44	

Comparable Survey Totals

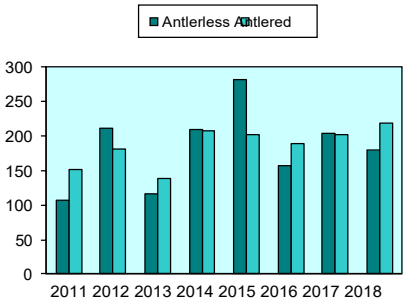


Zone Harvest Statistics

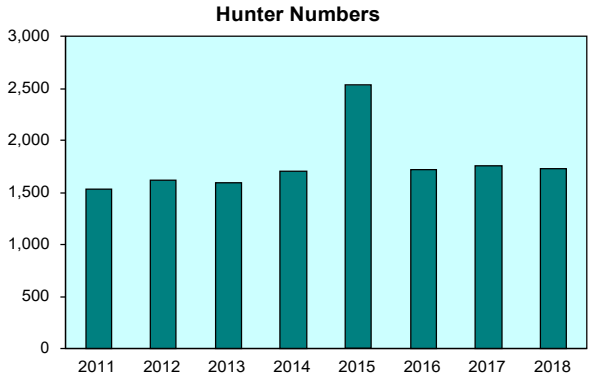
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	106	211	117	209	282	158	204	180
'A' Tag	106	202	112	204	276	148	182	180
'B' Tag	0	7	2	5	2	8	3	0
CH Tag	0	2	3	0	4	2	19	0
Antlered Harvest	152	182	139	208	202	189	201	218
'A' Tag	47	42	36	98	85	69	85	89
'B' Tag	93	123	90	97	100	104	96	116
CH Tag	12	17	13	13	17	16	20	13
Hunter Numbers	1,532	1,619	1,600	1,703	2,539	1,716	1,762	1,734
'A' Tag	880	973	1,056	1,176	1,876	1,211	1,214	1,210
'B' Tag	614	601	500	496	620	479	496	500
CH Tag	38	45	44	31	43	26	52	24
% 6+ Points	23	41	32	31	38	32	42	46

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

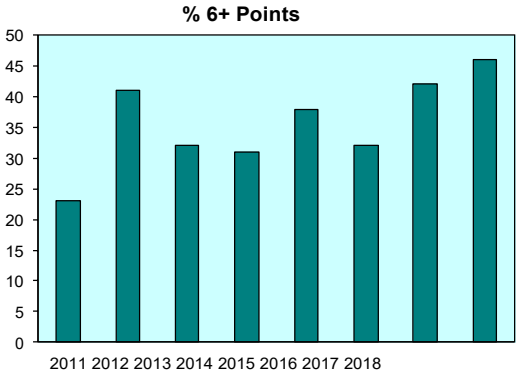


Figure 24. Bear River Zone Elk Status and Objectives.

Island Park Zone (GMUs 60, 60A, 61, 62, 62A)

Historical Background

In 2014, the Teton Zone was dissolved and GMU 62 was added to the Island Park Zone. Elk have been present, in varying numbers, in portions of the Island Park Zone throughout recorded history. There has been a general elk season in all or part of Fremont County since 1882. This undoubtedly is the longest running general hunting opportunity in the state. In GMU 62, general either-sex hunting was allowed until the mid-1970s. During much of the early twentieth century, these hunts were based upon elk populations summering in Yellowstone National Park and Wyoming.

In the late 1940s, elk were first observed wintering on high desert habitats of GMU 60A, with 582 wintering elk recorded in 1952. These wintering populations varied from about 700 to 1,200 elk until the mid-1970s, at which time the elimination of general either-sex elk hunting resulted in a rapidly increasing winter population. The population peaked in the winter of 1999–2000, when 4,134 elk were estimated on Sand Creek winter range. In GMU 62, the elk population was relatively stable through the 1980s with 30–40 animals wintering along Teton River in the basin, 40–50 animals being fed at a ranch on Conant Creek, and approximately 100 elk wintering in and adjacent to Teton River and its tributaries north of State Highway 33.

General bull hunting was restricted to spikes-only in 1991 in response to an accelerated timber harvest program on Targhee National Forest that resulted in poor bull escapement and low bull:cow ratios. Antlerless elk hunting opportunity has been managed through controlled hunts and, beginning in 1993, tags have been offered for any-bull hunting opportunity throughout the Island Park Zone.

Management Objectives

Objectives for the Island Park Zone (Figure 25) are to maintain a wintering elk population of 1,200–1,800 cows and 400–575 bulls, including 250–375 adult bulls. Proposed population objectives for Island Park Zone balance hunter opportunity and hunter success with crop and property damage on agricultural lands. Surveys from 2016 indicate elk wintering on the Sand Creek winter range in GMU 60A and 62 are slightly above objective for cows and within objective for bulls and adult bulls. In the past, obtaining adequate harvest on this population was difficult due to its migratory nature and the fact that significant portions of the herd spend fall in Yellowstone National Park and Harriman State Park where they are safe from harvest. During the early 2000's, weather during hunting season was adequate enough to get a good harvest, and we likely harvested the population more heavily than planned. Bull:cow ratios are difficult to measure for the hunted portion of the population, again, because they are inflated by those animals which avoid hunting. Additionally, a portion of the harvestable fall elk population in the Island Park Zone (particularly in GMU 61) migrates to winter ranges in Montana, and therefore is not counted as part of the Sand Creek sightability surveys in GMU 60A. Radio collar information suggests that well over half of the elk in the old Teton Zone (GMU 62) spend spring, summer, and fall in Wyoming or Yellowstone National Park. They often do not enter Idaho until after the general hunting seasons are over. This presents a difficult challenge for management. These migratory elk provide little opportunity for Idaho hunters. The Island Park Zone currently

provides the widest array of hunting opportunity available, including archery, centerfire, and muzzleloader seasons; early and late hunting; and controlled any-bull and either-sex hunts.

Habitat Management and Monitoring

Most elk summer range in the Island Park Zone occurs on USFS lands and is dominated by gentle topography lodgepole pine communities. Douglas fir stands are common on sloped sites. Timber management practices from 1970–1990 severely altered habitats in the Island Park Zone. In the mid-1970s, approximately two-thirds to three-fourths of the merchantable lodgepole pine stands on the Targhee National Forest were classified as dead or dying due to a mountain pine beetle infestation. Consequently, the USFS dramatically accelerated timber harvest. The result was an extensive network of roads and clear-cuts, which reduced elk habitat effectiveness and greatly increased elk vulnerability. Implementation of road and area closures in some areas and increasing security cover from continued forest regeneration will continue to help offset some of these effects into the future.

The Sand Creek winter range supports a vegetative complex typical of high-desert shrub-steppe dominated by sagebrush. Bitterbrush and chokecherry are prominent on areas of stabilized sand. Land ownership consists of a checkerboard of state, BLM, and private property. Cooperative use-trade agreements have benefited the elk population. A large area of winter range in the western portion of GMU 62 has been converted to agriculture. Some of this land is now enrolled in the CRP program. Elk winter range was lost to the construction and subsequent failure of the Teton Dam, although the greatest habitat loss associated with that event was deer habitat. Agricultural encroachment and suburban developments continue to threaten winter range in the Island Park Zone.

There are a number of domestic elk ranching and, specifically, “shooter bull” operations in this area. These operations pose several threats to wild elk including loss of available habitat behind fences, obstruction of migration routes with fences, possible disease sources, and possible genetic introgression from escapees. In 2003, a 5,000-acre domestic elk operation was constructed on South Juniper Hill. This operation is on the fringe of historic elk winter habitat but has attracted elk to the area because of domestic elk inside the fence and put elk on top of historic deer winter range next to the fence. In 2005, construction was completed on a new pen on Big Grassy, which is the core of the traditional elk winter range. This pen is estimated to enclose 16 square miles of prime elk and moose winter habitat. An unknown number of domestic elk were placed in the pen in the middle of 2,000–3,000 wintering wild elk. These pens reduce potential carrying capacity of the winter range, and could pose other problems for the Island Park Elk herd.

The Grassy Fire in summer of 2018 consumed a large portion of the Sand Creek winter range. This was a lightning strike caused fire. Nearly 100,000 acres burned including the areas west of Red road to Camas Creek, north of Grassy Ridge road to A2 road out of Dubois. This area is terminal winter range for elk, mule deer and moose. Rehabilitation on BLM and Idaho State Lands was implemented and long term monitoring sites were established in the impacted area.

Biological Objectives

Until recently, winter elk populations had been increasing steadily in Island Park Zone since they were first noticed on the Sand Creek Desert in the late 1940s. A total of 582 were recorded in

1952. This total climbed steadily to the 4,134 elk counted in 2000 and then decreased to 3,246 in 2002 and 1,748 in 2006. Significant reductions in hunter opportunity (both to the general season and controlled hunts) were made after the 2006 survey. The population has apparently responded to these changes, as there were 3,271 elk estimated during the 2016 sightability survey. An additional 575 elk were counted in GMUs 62 and 62A for a total of 3,846 elk in the Island Park zone.

Recruitment measured through sightability surveys indicates the moderately productive nature of the herd, with calf:cow ratios typically in the 30–35 calves:100 cows range. Bull:cow ratios have rebounded markedly since the implementation of spike-only general hunting in 1991. Bulls:100 cows ratios have ranged from 40–68. It should be noted, however, that these totals are buttressed by an unknown segment of the population that spends summer and fall in Harriman State Park and Yellowstone National Park. These animals are largely un-harvested, being subjected to hunting pressure only while migrating to winter range.

There are 2 groups of elk that have been historically fed in GMU 62. The Department has undergone many strategies to move or redistribute these elk through hunting. These animals have been fed during winter on private ranches at Teepee Creek and Conant Creek. Both feed grounds have been eliminated. As both a brucellosis control method and to comply with Commission policy, annual feeding operations should be eliminated. These feed grounds likely short-stopped elk that historically migrated further to the west during the winter. These elk summer in Wyoming and in the Bechler Meadows area of Yellowstone National Park.

An unknown segment of the harvestable fall population, primarily in GMU 61, migrates to winter ranges in Montana. These animals are likely available for harvest during at least a portion of the Island Park seasons, but are not in Idaho during sightability surveys. During spring 2009, the Department initiated a research project designed to assess newborn elk calf survival, document seasonal movements, and determine wintering destination for elk summering in GMU 61. The first year's calf capture effort (2009) was focused around Henry's Lake in GMU 61. Thirty-eight calves were collared around Henry's Lake, as far west as Icehouse Creek. Early calf survival (birth through 3 months of age) was 90% for the collar calves. Survival of calves through April of 2010 was 83%. Four calves died during monitoring: 1 mountain lion predation, 1 probable black bear predation, and 2 of unknown cause (i.e., not enough evidence to determine cause). Most (>90%) of the collared calves remained in Idaho during all of the Island Park Zone elk hunting seasons, while 2 calves ventured into Montana during the latter part of the general season. Of the 10 calves that retained their collars throughout the winter migration, 6 migrated to winter ranges in Montana (from the ID-MT border to as far north as Moose Creek in the Madison Valley), 3 wintered along the west side of Henry's Lake (Duck Creek), and 1 migrated to the traditional Island Park winter range on the Sand Creek desert (wintered east of Hamer). The calf that migrated to the Sand Creek desert was collared in the east end of the Shotgun Valley (Icehouse Creek), while all of the calves collared around Henry's Lake stayed around the lake or moved to Montana. The second year of the project (2010) was focused in the western portion of 61 (Centennial Mountains), from Icehouse Creek to I-15. Department personnel collared 42 newborn calves in the study area during the spring of 2010, with a good distribution of collared calves from east to west. The movements and survival of these calves was monitored

through the spring of 2011, and a final project report was completed during the summer-fall of 2011.

During the winter of 2008–2009, 39 elk were translocated from GMU 74 (near Swan Lake) to winter range in GMU 60A (Egin-Hamer Road). These elk were a repeat depredation problem in GMU 74. All of the elk tested negative for Brucellosis prior to the translocation.

Domestic elk operations located in this zone present a significant risk of impacting wild herds. Many of these operations are "shooter bull"-based with large pens and are within occupied elk range. This leads to significant opportunity for domestics to contact wild elk through the fence or by escape. This presents risk of disease transmission and genetic introgression.

Capture, Radio-mark, and or Telemetry

A total of 26 elk were radio marked in GMU 62 and the west side of 65. The objective of this marking was to gain survival information and detailed migration routes for this elk population.

Population Surveys and Monitoring

In 2016 this zone was surveyed during winter months. Antlered elk were within plan objectives, antlerless elk numbers were above objective, and calf/cow ratios were at 37 calves per 100 cows. This population is performing well.

Inter-specific Issues

Unfortunately, little evidence exists to evaluate the potential relationships between elk, mule deer, and moose in the Island Park Zone. White-tailed deer are scattered throughout the Island Park Zone, mainly along riparian corridors, and appear to be expanding their range within the Zone. Heavy grazing/browsing by deer, elk, and moose may alter Columbian sharp-tailed grouse habitats. There is concern over elk herds establishing winter use in traditional mule deer winter range in Teton Canyon.

Domestic sheep and cattle grazing occur throughout the Island Park Zone which could pose some competitive concerns for elk, especially on winter range during drought years.

Predation Issues

Black bear densities appear to be moderate and stable in the Island Park Zone. Grizzly bear numbers are increasing and their range seems to be expanding westward in the Zone. Mountain lions are relatively rare. Coyotes are common, especially in the winter range portion of Island Park Zone, but are not known to have much impact on elk populations. Wolves introduced by the USFWS in Yellowstone National Park have become established in the Island Park zone, which could affect other predators and this elk population.

Winter Feeding and Depredation

No Department-sponsored elk feeding activities occur in the Island Park Zone except under emergency situations. Agricultural encroachment on Sand Creek winter range increases risk of elk depredations on stored crops, especially under adverse winter conditions. Some feeding by

private citizens, resulting in the short-stopping of elk, has occurred on Ashton Hill. Observations in GMU 62 during the 2000–2001 aerial survey indicated that most elk in this zone were associated with private feeding operations. Educational efforts need to continue to give non-sanctioned feeders a better understanding of problems associated with artificially-fed elk.

During the winter of 2007–2008, approximately 800 mule deer were fed on an emergency basis at Sand Creek WMA. No elk were observed on this feed line during the operation, but elk were observed in the vicinity. During the very end of the winter of 2008–2009, the Department baited (10–15 bales of hay) a small group of elk (approximately 12) away from Ashton. The elk had been feeding on a hay stack and were staying in close proximity to the highway. The baiting was used to move them away from the highway, decreasing the public safety risk. Also during the winter of 2008–2009, approximately 200 elk wintered above the Sand Creek ponds. These elk had essentially become "trapped" in the area as snow accumulated quickly on the desert to the west. The Department was poised to supply these elk with supplemental feed if conditions warranted it, but the decision was made that conditions for these elk were satisfactory and the elk were not fed. No feeding or baiting occurred during winter 2010–2011 or 2016–2017.

During the 2018–2019 winter, IDFG personnel, anticipating depredation issues related to the reduction in winter forage availability due to the Grassy Ridge fire, had stock piled hay. While the emergency feeding was not carried out, elk seemed to shift south and east over the winter, avoiding the burn scar in favor of intact sagebrush habitat.

During the winter of 2007–2008, most elk in the Teton Valley were concentrated at a Department sanctioned bait site along the Teton River (see below). A description of the history of each feed site follows.

Portions of the elk that winter in GMU 62 have been on a feed lot in the Chester area since 2015. The Department and the owner of the feed lot have been working on reducing depredations and looking at long term solutions.

Conant Creek - In the late 1950s, a private landowner began feeding approximately 20 elk on upper Conant Creek. Over the years, the Department has provided this landowner hay to bait the elk away from stored hay and cattle. The number of elk increased and in the interim, the Department tried to work with the landowner to solve the problem with options other than feeding. All such efforts were rejected and the landowner had successfully enlisted the support of politicians and sportsmen in continuing the feeding. Things changed in 2002 when the cattle herd tested positive for brucellosis. Since then, the cattle herd has been destroyed, a fence has been built to keep elk out of the feeding grounds, and no elk have been fed there.

Teepee Creek (Felt) - A landowner on Teepee Creek began feeding elk in the early 1990s. There are approximately 150 elk habituated to this operation. The Department has provided panels to the landowner to protect haystacks but has not provided any feed. During the winter of 2007–2008, a few elk were inadvertently fed in a horse corral but they seemed to disperse from the site later in the season. It is believed this and the Conant Creek operation have short-stopped elk from migrating to winter ranges further west.

Conversion of elk winter range into agricultural fields and domestic elk farms will likely increase depredation problems within this zone. These elk are now migrating west to the Hamer area during moderate to severe winters. This area has been almost completely converted to agricultural fields and offers very little for wintering elk. The department has resorted to depredation hunts in this area as thousands of elk depredate hundreds of widely scattered haystacks. Periodically, agricultural producers dump excess potatoes in the Sand Creek Desert, and elk have been observed wintering on these sites.

Hunting and Harvest Characteristics

Total harvest in the Island Park Zone in 2018 was estimated at 695 elk based on the mandatory harvest report. This represents a 7% increase in harvest from 2017 (650) and is similar to the previous three-year average of 673 (2015-2017). Total hunter numbers were estimated at 3,189 for 2018 compared to 3,001 hunters for 2017. An average of 38% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 22% hunter success rate.

Disease Monitoring

Elk found within the Island Park Zone have Brucellosis; a disease that can cause cattle to abort. Much of the Island Park Zone is found within the Designated Surveillance Area (DSA). The Department works with the Idaho State Department of Agriculture and United States Department of Agriculture to prevent contact between elk and cattle, especially during the winter months. This often includes permanent and temporary stack yards to protect stored hay. All adult female elk captured within the zone are tested for Brucellosis. Hunter blood test kits are often sent to sportsman to monitor the distribution and prevalence of the disease.

The Department recently revised its chronic wasting disease (CWD) surveillance strategy. Because CWD has a higher probability of being detected in deer, the primary focus of the new surveillance strategy is focused on this species. However, any mortality from collared elk or elk displaying symptoms (i.e. suspect animals) of CWD is submitted for testing.

Management Discussion

Sightability estimates are needed periodically to monitor this elk population. Also, better knowledge of summer/fall spatial distribution of this elk herd could improve our ability to achieve harvest objectives. In addition, this information is valuable to assess the effectiveness of the travel management policy on the Targhee National Forest. A better understanding of interstate movements of the Island Park elk, particularly those moving to winter ranges in Montana, could improve our harvest management and allow us to better tailor our season structure to facilitate interstate elk management cooperation. The ongoing elk calf survival and movements study in GMU 61 should improve our understanding of this populations movements and harvest availability.

In GMU 62, a comprehensive inventory of winter range in this zone is needed to fully accomplish the objective of ending all winter feeding. The condition of some winter ranges may provide an opportunity for enhancement for elk, perhaps through seeding, burning, or changes in livestock management. As part of this, an assessment of the location, quality, and remaining

terms of enrollment of the area's CRP lands is essential if the fed populations in this zone are to become self-sufficient. Continued work with private landowners in the Zone to secure stored crops and winter feed lots is also important to segregate wintering elk and cattle. Additionally, information on snowmobile use of these lands is needed. If the lands are to be made available to elk, snowmobiles should be discouraged.

Elk that summer in Yellowstone National Park near the Bechler Meadows and Grand Teton National Park historically migrated to the Sand Creek desert to winter. It was estimated that up to 1,000 elk migrated this way in the 1980's and 1990's. Current estimates are a few hundred. In 2016, the Grand Teton National Park staff contacted the Department wanting to mark some of these elk for more current data. The Department will work as available with other agencies for this study.

Elk

Island Park Zone (GMUs 60, 60A, 61, 62, 62A)

		3-Year Averages	
Square Miles =	2,886	Hunters per square mile =	1.04
% Public Land =	63%	Harvest per square mile =	0.40
Major Land Type =	Forest	Success Rate =	22%
	Rangeland	%6+ Points =	38%

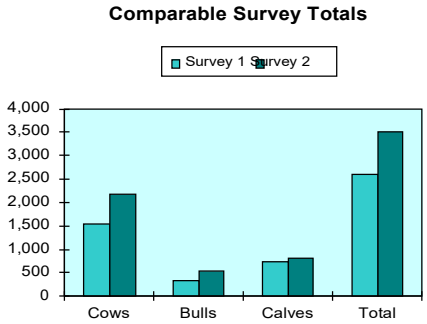
Winter Status & Objectives

Zone Total	Year	Current Status Cows	Bulls	Adult Bulls	Objective Cows	Bulls	Adult Bulls
	2016	2,173	523	343	1,200-1,800	400-575	250-375
Bulls per 100 Cows			**24**	**16**		**30 - 35**	**18 - 22**

Population Surveys

		Survey 1					Survey 2			
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
60	ND					2016	2	15	0	17
60A	2010	1,476	313	722	2,511	2016	2,033	470	766	3,269
61	ND					ND				
62	2011	65	7	20	92	2016	133	35	40	208
62A	ND					2016	5	3	3	11
Comparable Surveys Total		**1,541**	**320**	**742**	**2,603**		**2,173**	**523**	**809**	**3,505**
Per 100 Cows			**21**	**48**				**24**	**37**	

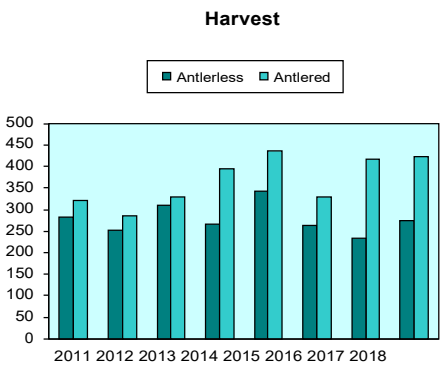
Note: ND = no survey data available.

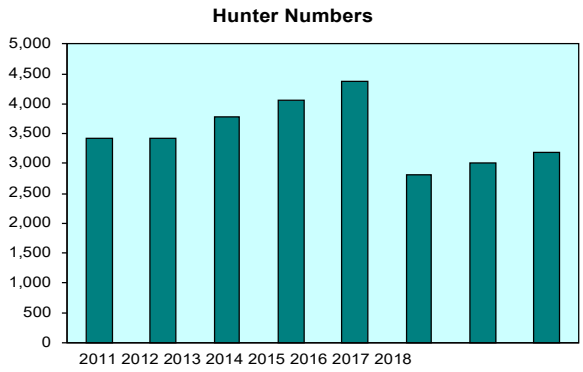


Zone Harvest Statistics

	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	283	251	309	267	343	263	234	273
'A' Tag	79	110	89	116	148	87	115	128
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	204	141	220	151	195	176	119	145
Antlered Harvest	322	284	330	395	435	328	416	422
'A' Tag	183	198	174	264	291	237	310	316
'B' Tag	0	0	8	0	0	0	0	0
CH Tag	139	86	148	131	144	91	106	106
Hunter Numbers	3,415	3,417	3,786	4,058	4,365	2,804	3,001	3,189
'A' Tag	2,453	2,571	2,846	3,177	3,476	2,061	2,227	2,382
'B' Tag	0	0	63	0	0	0	0	0
CH Tag	962	846	877	881	889	743	774	807
% 6+ Points	20	26	48	30	46	33	44	36

Note: % 6+ pts does not include spike-only harvest.





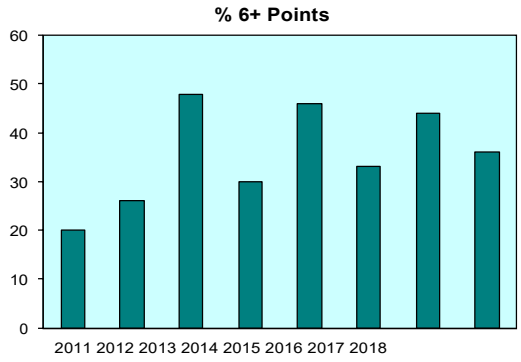


Figure 25. Island Park Zone Elk Status and Objectives.

Palisades Zone (GMUs 64, 65, 67)

Historical Background

In 2014, the Teton Zone was dissolved and GMU 65 was added to the Palisades Zone. Reports of elk in the 1800s and early 1900s are imprecise and inconclusive for this area; however, it is likely elk were present. General either-sex hunting was allowed until the mid-1970s. At that time, over-harvest became a concern and the format was changed to allow 5 days of general hunting for bulls only. Hunting for antlerless elk was restricted to permits. The elk population was relatively stable through the 1980s with 50–60 animals wintering in the Game Creek/Moose Creek area and 30–40 animals wintering along Teton River in the basin. Elk damage to haystacks in Swan Valley dates back to the mid-1950s, corresponding with a loss of winter range from inundation by Palisades Reservoir on the South Fork of Snake River. In the mid-1970s, the Department began feeding elk in Rainey Creek to bait them away from livestock feeding operations. This activity continued until 2005 and involved approximately 150 animals. The Department does not plan to feed elk again at Rainey Creek or Victor. The elk population wintering in this zone has increased gradually over the last 3 decades.

Management Objectives

Objectives for the Palisades Zone (Figure 27) are to maintain 400–600 cows and 125–200 bulls, of which 75–125 should be adult bulls. An aerial survey conducted during 2016 indicated that the population is at objective for cows and above objective for total bulls as well as adult bulls. Proposed population objectives for the Palisades Zone balance hunter opportunity and hunter success with crop and property damage on agricultural lands. Current and future management efforts will be consistent with eliminating the artificial feeding operation that was conducted at Rainey Creek and Victor, as directed by the Wildlife Brucellosis Task Force Report and Recommendations to the Governor (Sept. 1998). Following elimination of annual feeding, the population will be allowed to recover to the extent it can be supported on natural forage, particularly on winter ranges northwest of Dry Canyon. Population manipulation will be accomplished primarily through public hunting; however, capture and translocation could also be employed. This zone offers most of what little semi-backcountry hunting opportunity remains in eastern Idaho.

Habitat Management and Monitoring

Abundant spring, summer, and fall habitat exists in this zone. Winter range is limited and is more characteristic of mule deer habitat than elk habitat. Most elk winter range has been lost to agriculture and inundation by Palisades Reservoir, and is currently threatened by proposed housing developments. Potentially important winter ranges in the northern portion of the zone (Grandview Point) are now nearly vacant, likely due to displacement of elk by snowmobile activity. Winter range shrub communities on slopes in the vicinity of the mouth of Rainey Creek appear to have suffered from years of overgrazing by elk and mule deer. The Palisades Ranger District of the Caribou Targhee National Forest is implementing aspen management, conifer encroachment, prescribed fire, and urban interface fuel reduction programs in the Rainey Creek area. Mature mountain mahogany stands throughout the zone may be providing only limited forage, in addition to precluding all but a sparse understory of other species. Recently, urban sprawl, particularly in the east portion of GMU 65, has crept up the hillsides and reduced much

of what limited winter range existed in that portion of the zone. Additionally, recent increases in winter recreation (snowmobiles and skiing) likely reduce suitable winter range in this Zone.

Biological Objectives

The most pressing biological issues in this zone are related to the winter feeding of elk and the condition of available winter range for elk. The elk herd wintering in Rainey Creek, about 150 animals, has a documented brucellosis exposure rate exceeding 25%, based on testing of >100 individuals. Late hunts have had limited success in reducing this population. Until 2005, a program was implemented to capture and remove all positive-testing female animals and translocate negative testing animals to winter ranges northwest of Dry Canyon. This program was discontinued after 2005 and the Department has discontinued all feeding in Rainey Creek. Although a significant number of elk continue to use the Rainey Creek drainage during the winter, elk were more dispersed throughout the drainage, and adjacent areas, during the 2009 survey than they were during feeding operations prior to 2005. The Department goal is to keep wintering elk and cattle separated in Swan Valley and the Teton Basin using exclusionary devices (i.e., paneling, fencing) and hazing.

The aerial survey conducted in the Palisades Zone in 2016 indicated an increase in both the calf:cow ratio and bull:cow ratio of 41:100 and 57:100, respectively.

The Teton Basin population (GMU 65) has increased over the past 10 years and consists of 2 groups. One herd winters east and south of Victor. It is estimated the winter range in the area could support 50–60 animals. Addressing overpopulation through harvest is difficult in this area because many of the animals are in Wyoming until late winter. Historically, the other group winters along the Teton River in Teton Basin. Up to130 animals have been counted here and pose a major depredation threat under normal winter conditions. This herd most likely moves to the Teton Basin from the Big Hole Mountains. The survey in 2015–2016 counted 99 elk in this area. More elk were counted on the east side of the valley in 2015–2016. This group of elk, 55 individuals, is very close to the town of Tetonia and wintering on private property.

Domestic elk operations in this zone present a significant risk to wild elk herds. Many of these operations are shooter bull-based, with large pens in occupied elk range. This provides significant opportunity for domestic elk to contact wild elk through the fence or by escape. This situation creates a risk of disease transmission and genetic introgression.

Capture, Radio-mark, and or Telemetry

A total of 6 antlerless elk were radio marked east of Victor, Idaho in February 2018. This is part of a larger study (graduate student) GMU (GMU's 62 and 65) with Wyoming Game and Fish, Grand Teton National Park, and Yellowstone National Park.

Population Surveys and Monitoring

The aerial survey conducted in the Palisades Zone in 2016 counted 819 elk. A total of 413 antlerless elk were counted and total bulls were 236 individuals. The survey indicated an increase in both the calf:cow ratio and bull:cow ratio of 41:100 and 57:100, respectively.

Inter-specific Issues

In addition to elk, the Palisades Zone is home to an important mule deer population, a strong moose population, and is grazed extensively by domestic livestock. Inter-specific relationships among these species and elk are not well-monitored and are poorly understood. Competition between elk and mule deer is probably occurring in the immediate vicinity of Rainey Creek, where both species were frequently fed from the mid-1970s through 2005. There is also concern over wintering elk herds are using traditional mule deer winter range in the Heise area.

Predation Issues

Black bear and mountain lions are common in this zone. Hunters in this elk zone have reported seeing black bears consistently. Coyotes are common, especially on the winter range, but are not known to have much impact on elk populations. Wolves introduced by USFWS in 1995 have established a territory in GMU 67, which could affect elk populations. There have been several confirmed grizzly bear sightings in this elk zone although it is not known whether these bears were moving through the area or consistently use the GMU's that make up the Palisades elk zone.

Winter Feeding and Depredation

In the late 1970s, a rancher near Irwin began feeding cattle near the mouth of Rainey Creek and along the USFS boundary. Concurrently, large areas of browse in the area were being converted to agriculture. The combination of these factors resulted in elk damaging stored hay and taking advantage of the livestock feed-lines. The Department resolved these conflicts by baiting the elk up into Rainey Creek. It is the Department's intent to eliminate all but emergency feeding of elk in this zone. This should also reduce any brucellosis-related concerns.

During the winter of 2007–2008, the Department baited approximately 125 elk to a site above Swan Valley on Pine Creek bench to prevent human safety concerns along Highway 26. A total of 24 tons of hay were fed over a 68-day period for this operation. Also during the winter of 2007–2008, Department personnel used snow machines to push elk away from livestock operations in Swan Valley on numerous occasions. The region responded to numerous complaints about elk-cattle interactions and elk-hay interactions during the winter 2010–2011; although no feeding or baiting activities were initiated.

The same winter most elk in the Teton Valley were concentrated at a Department sanctioned bait site. In Victor a herd of approximately 50 elk traditionally wintered in the foothills east and south of Victor. Around 1990, a landowner began feeding this elk herd, which has grown each year and now numbers approximately 200 animals. The Department has rejected all requests to feed elk or establish a permanent feed ground at this site. Permanent stack yards, panels, and hazing have been employed to combat depredations at this site. A large damage payment was made to a nursery in the vicinity, which was then fenced at significant expense. The Department provided hay to this operation on 2 winters, which were deemed to be emergency cases.

Hunting and Harvest Characteristics

Total harvest in the Palisades Zone in 2018 was estimated at 217 elk based on the mandatory harvest report. This represents a 28% increase in harvest from 2017 (169), but is lower than the previous three-year average of 228. Total hunter numbers were estimated at 1,409 for 2018 compared to 1,364 hunters for 2017. An average of 54% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 16% hunter success rate.

Disease Monitoring

Elk found within the Palisades Zone have Brucellosis; a disease that can cause cattle to abort. Much of the Palisades Zone is found within the Designated Surveillance Area (DSA). The Department works with the Idaho State Department of Agriculture and United States Department of Agriculture to prevent contact between elk and cattle, especially during the winter months. This often includes permeant and temporary stack yards to protect stored hay. All adult female elk captured within the zone are tested for Brucellosis. Hunter blood test kits are often sent to sportsman to monitor the distribution and prevalence of the disease.

The Department recently revised its chronic wasting disease (CWD) surveillance strategy. Because CWD has a higher probability of being detected in deer, the primary focus of the new surveillance strategy is focused on this species. However, any mortality from collared elk or elk displaying symptoms (i.e. suspect animals) of CWD is submitted for testing.

Management Discussion

A comprehensive inventory of winter range in this zone is needed. Although some winter range in the Zone has been lost forever (e.g., areas flooded by Palisades Reservoir), the condition of some winter ranges may provide opportunities for habitat enhancement for elk, perhaps through burning or changes in livestock management. As part of this, an assessment of the location, quality, and remaining terms of enrollment of the area's CRP lands will be needed. Continued work with private landowners in the Zone to secure stored crops and winter feed lots is also important to segregate wintering elk and cattle. Additionally, information on snowmobile use of these lands is needed. If the lands are to be made available to elk, snowmobiles should be discouraged.

Elk

Palisades Zone (GMUs 64, 65, 67)

Square Miles =	771	3-Year Averages	
% Public Land =	52%	Hunters per square mile =	1.78
Major Land Type =	Forest	Harvest per square mile =	0.61
	Agriculutre	Success Rate =	16%
		%6+ Points =	54%

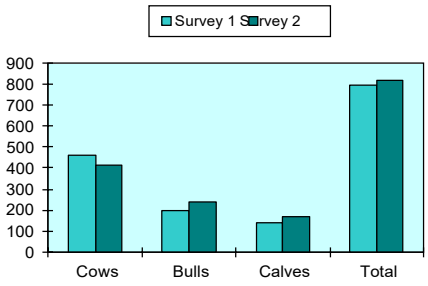
Winter Status & Objectives

Zone Total	Year	Current Status Cows	Bulls	Adult Bulls	Objective Cows	Bulls	Adult Bulls
	2016	413	236	184	400 - 600	125 - 200	75 - 125
Bulls per 100 Cows			57	45		30 - 35	18 - 22

Population Surveys

GMU	Year	Survey 1 Cows	Bulls	Calves	Total	Year	Survey 2 Cows	Bulls	Calves	Total
64/65/67	2009	461	195	141	797	2016	413	236	170	819
Comparable Surveys Total		461	195	141	797		413	236	170	819
Per 100 Cows			42	31				57	41	

Comparable Survey Totals

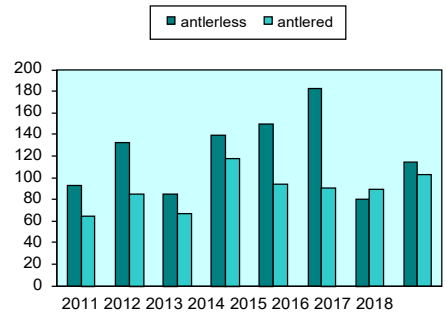


Zone Harvest Statistics

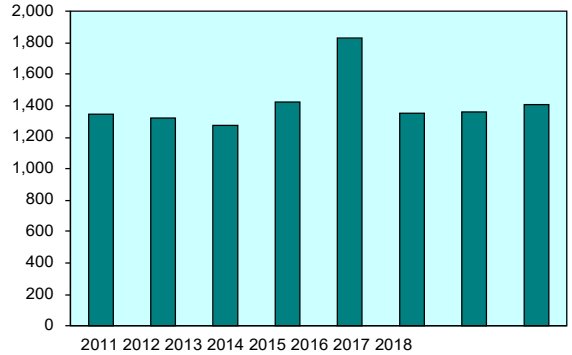
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	93	133	85	139	150	182	80	114
'A' Tag	71	106	59	96	112	142	61	78
'B' Tag	0	0	1	2	2	8	2	0
CH Tag	22	27	25	41	36	32	17	36
Antlered Harvest	64	85	67	118	94	90	89	103
'A' Tag	18	19	13	40	31	44	33	41
'B' Tag	37	50	48	69	58	43	44	57
CH Tag	9	10	6	9	5	3	12	5
Hunter Numbers	1,344	1,326	1,275	1,426	1,831	1,353	1,364	1,409
'A' Tag	601	699	832	902	1,194	862	830	924
'B' Tag	220	195	303	384	502	379	412	356
CH Tag	138	120	140	140	135	112	122	129
% 6+ Points	54	54	70	60	60	42	64	56

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

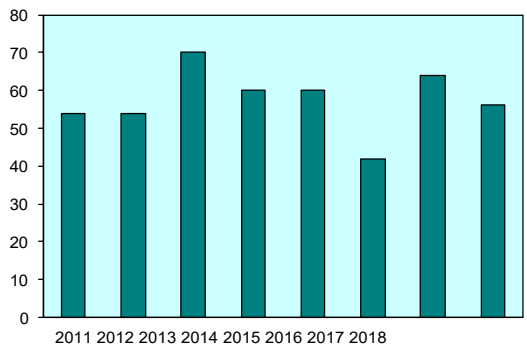


Figure 27. Palisades Zone Elk Status and Objectives.

Tex Creek Zone (GMUs 66, 69)

Historical Background

Elk were present in the Tex Creek Zone during the late 1840s, as reported by Osborne Russell in Journal of a Trapper (1914). According to residents of the area, elk were rarely seen during the early twentieth century. The elk population increased during the 1940s and by the mid-1950s depredation complaints on winter wheat were common. The first modern hunt was implemented in 1952 and consisted of 50 permits. Beginning in 1955, general hunting was allowed and has continued in some form to the present.

The elk population continued to grow through 2005, when the population was estimated at 5,200. Controlling growth of the Zone's elk population has driven harvest strategies during this period. Recently, historical over-harvest of bulls and under-harvest of cows has been addressed with implementation of the dual-tag zone system with general antlerless hunts and increased antlerless tags on late controlled hunts. Aerial surveys conducted in 2010 and 2013 estimated the population at 3,831, and 3,899 elk respectively. The elk population is back up to 5,495 as of 2018.

Management Objectives

Objectives for the Tex Creek Zone (Figure 28) are to winter 2,000–3,000 cows and 425–625 bulls, of which 250–350 should be adult bulls. The most recent aerial survey information, January 2018, indicates that cows, total bulls, and adult bulls are all above objective. However, a large number of elk that summer in GMU 66A (Diamond Creek Zone) winter in the Tex Creek Zone and objectives differ between the zones, therefore managing harvest and opportunity has been problematic. Management of Tex Creek elk should be coordinated with management of GMU 66A (Diamond Creek Zone). Depredation problems will be solved using hunting as a first option.

Habitat Management and Monitoring

Habitat throughout the Tex Creek Zone is, or has the potential to be, highly productive. The fertile, mineral rich soils of the area produce diverse plant communities including sagebrush-grasslands, extensive aspen patches, and cool moist conifer stands primarily on north- and east-facing slopes. Terrain is generally mild and much of the private land in the area is dry-farmed with cereal grains. Nearly half of the zone is private land with the balance of public lands administered by USFS, BLM, IDL, and the Department. A significant portion of the private land is CRP-enrolled and is contributing substantially to the area's carrying capacity during all seasons. Tex Creek WMA, partially owned and totally managed by the Department, provides 30,000 acres of prime winter habitat for elk, mule deer, and moose in the zone. This land was purchased to mitigate for habitat inundated or destroyed by the Ririe, Palisades, and Teton Dams.

In August 2016, a large wildland fire (Henry's Creek fire) burned 52,000 acres including approximately 75% of the Tex Creek WMA. Due to reduced winter forage on the Tex Creek area, the Department implemented a winter feeding operation in Indian Fork. Over 1,200 ton of alfalfa was fed to approximately 3,500 elk From December 2016 until March 2017.

Biological Objectives

From a biological perspective, elk in GMUs 66–69 (Tex Creek Zone) and 66A (Diamond Creek Zone) should be managed as one population, in the same zone. The Tex Creek elk are productive and their future management will be heavily influenced by the need to control this population. Placing all seasonal ranges of these elk in the same zone would be appropriate to accomplish this objective.

Due to concern over total wintering elk numbers in GMU 69 being too high for the area and their impacts on the local mule deer herd, the antlerless hunt was restructured in 2004. The hunt was moved from 21 October–7 November to 15–30 November. The objective of this change was to harvest more cows, especially those migrating into GMU 69 from GMU 66A. The hunt was successful in harvesting more cows but brought about some unethical hunter behavior. The later season, combined with some very unusual early storms and a lack of hunting pressure in late October and early November, brought large herds of elk onto winter range before the hunt opened. This left elk vulnerable and some hunters acted inappropriately. The hunt was successful at harvesting more elk, but even with the larger harvest, the herd was still estimated to be 5,200 animals in a post-hunt aerial survey. In 2005, the hunt was changed back to a 21 October opener but still remained open until 30 November. The season structure was changed again in 2013. The rifle portion of the A tag was shortened from 5 weeks to 3. The season now runs October 22 thru November 16. The statewide elk management plan was revised in 2013. As part of this revision an elk hunter survey indicated that elk hunters would like elk populations to be higher. The region was given direction to increase elk populations in those zones where they thought that increases were feasible and responsible; Tex Creek was identified as one of those zones.

Domestic elk operations in this zone present a significant risk to wild elk herds. Many of these operations are shooter bull-based, with large pens in occupied elk range. This provides significant opportunity for domestic elk to contact wild elk through the fence or by escape. This situation creates a risk of disease transmission and genetic introgression.

Capture, Radio-mark, and or Telemetry

No elk are currently radio marked in the Tex Creek zone.

Population Surveys and Monitoring

In 2018, this zone was surveyed during winter months (February). Antlered and antlerless elk were above objective for this zone and calf/cow ratios are at 34 calves per 100 cows. This population is growing and performing very well.

Inter-specific Issues

The Tex Creek Zone supports an important mule deer population. During the winter of 1992–1993, this deer population sustained significant mortality and did not recover as hoped. During the winters of 2005–2006, 2007–2008, and 2010–2011, this population, along with other eastern Idaho mule deer populations, again sustained significant fawn mortality due to severe and extended winter conditions. The area also supports a strong moose population and is grazed extensively by domestic livestock. In the past, mule deer and elk appeared to be spatially separated on winter range and there were no known conflicts between elk and moose; however,

relationships among these species were not monitored or well understood. A graduate student research project was initiated in 2005 to explore elk and mule deer competition in the Willow Creek Canyon complex (Atwood 2009). This study found that elk and mule deer tended to segregate during mild winters, but that elk moved down onto traditional mule deer winter ranges during severe winters. Although elk ranges during the severe winter entirely encompassed the deer winter range, the winter diets of the species remained fairly segregated, suggesting minimal dietary competition. In addition, elk presence did not significantly affect mule deer movements, diets, and stress levels. More research is needed to address mule deer and elk competition on summer and transitional ranges.

Predation Issues

Black bear densities appear to be low and stable in this zone. Mountain lions are common. Coyotes are also common, especially on the winter range, but are not known to have much impact on elk populations. Wolves introduced by USFWS in 1995 have moved through the area, which could affect elk. The one established pack in this Zone (Fall Creek) was removed by USDA-Wildlife Services in the summer of 2009 due to repetitive livestock depredations. There are currently no documented wolf packs in this Zone, although several unverified reports have been filed with the Department about 3–4 wolves in GMUs 66 and 69. A few grizzly bears have been reported in GMU 66 by elk and deer hunters.

Winter Feeding and Depredation

Elk are not fed in this zone except on an emergency basis, which occurred during the winters of 1988–1989, 1992–1993, 2003–2004, and 2016–2017. Because of the zone's proximity to known brucellosis-infected herds in Wyoming and Idaho, it is extremely critical that feeding on anything less than a genuine emergency basis be avoided. Large round bales of grass-alfalfa hay have been left in the field on Tex Creek WMA periodically to attract elk to the area and hold them on that winter range.

During winter 2003–2004, approximately 2,000 elk crossed Willow Creek and many were very close to Iona Hill. After a few elk were killed on the railroad tracks close to Iona, the Department decided to drive the elk back to Tex Creek WMA and bait them there with hay to keep them away from town and potential trouble. The operation required 2 driving operations and feeding ~76 tons of hay to over 1,400 elk. The elk were successfully held until the end of winter.

During the winter of 2007–2008, significant snow pack and extended winter conditions caused approximately 300 elk to move down along the Highway 26 corridor south of Ririe, creating human safety concerns along the roadway. An additional 80 elk moved down along roadways in east Ammon. On numerous occasions Department personnel used snow machines to push these elk groups to the south and east away from roadways. During the winter of 2008–2009, approximately 400 elk moved down near Highway 26 south of Ririe. On occasion, Department personnel use snowmobiles to push these elk south and east away from the highway. As many as 1,000 elk moved down near Hwy 26 between Clark Hill and Iona during the winter of 2010 – 2011. The region dealt with dozens of complaints and depredation calls that were associated with these groups of elk but winter feeding was not initiated. Approximately 350 elk were observed crossing the South Fork of the Snake River near Burns Creek in late winter 2017–2018. These elk stayed along highway 26 and the Antelope Creek/Birch Creek area until spring.

The Henry's Creek fire that burned 52,000 acres of the Tex Creek winter range greatly reduced winter forage for this elk herd. Due to this, the Department implemented a winter feeding operation in Indian Fork on the Tex Creek WMA. Over 1,200 tons of alfalfa was fed to approximately 3,500 elk from December 2016 until March 2017.

The heavy snow load in the winter of 2018/2019 pushed elk down into the Willow Creek drainage, but the lack of winter wheat and similarly heavy snow loads on the Ball property held elk on Tex Creek WMA that in previous winters had contributed to depredation issues in the area.

Hunting and Harvest Characteristics

Total harvest in the Tex Creek Zone in 2018 was estimated at 745 elk based on the mandatory harvest report. This represents an 8% increase in harvest from 2017 (689) and is lower than the previous three-year average of 830. Total hunter numbers were estimated at 2,671 for 2018 compared to 3,766 hunters for 2017. An average of 35% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 22% hunter success rate.

Disease Monitoring

Elk found within the Tex Creek Zone have Brucellosis; a disease that can cause cattle to abort. Small parts of the Tex Creek Zone are found within the Designated Surveillance Area (DSA). The Department works with the Idaho State Department of Agriculture and United States Department of Agriculture to prevent contact between elk and cattle, especially during the winter months. This often includes permanent and temporary stack yards to protect stored hay. All adult female elk captured within the zone are tested for Brucellosis. Hunter blood test kits are often sent to sportsman to monitor the distribution and prevalence of the disease.

The Department recently revised its chronic wasting disease (CWD) surveillance strategy. Because CWD has a higher probability of being detected in deer, the primary focus of the new surveillance strategy is focused on this species. However, any mortality from collared elk or elk displaying symptoms (i.e. suspect animals) of CWD is submitted for testing.

Management Discussion

In 1978, 1979, and 1980, the Department conducted radio-telemetry studies of elk wintering on Tex Creek WMA, the results of which indicated these elk summered primarily in GMUs 66 and 66A with some summering in GMUs 69 and 76. This work was duplicated in 1998–1999 and 2005–2009 with results showing similar trends in distribution and movement. All data on the movements and distribution of Tex Creek Zone elk should be fully analyzed, along with the movements and distribution of Diamond Creek Zone (GMUs 66A and 76) elk, to re-evaluate the management strategy for these intertwined populations.

Literature Cited

Atwood, M. P. 2009. Interactions between mule deer and elk on winter range at the Tex Creek Wildlife Management Area, Idaho. Thesis, Idaho State University, Pocatello, USA.

Russell, O. 1914. Journal of a Trapper, 1834 –1843. Syms-York, Boise, Idaho.

Elk

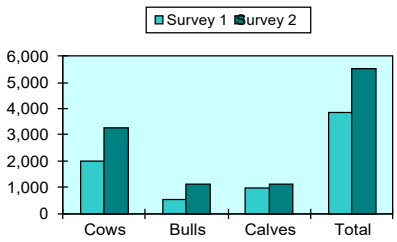
Tex Creek Zone (GMUs 66, 69)

Square Miles =	1,796	3-Year Averages	
% Public Land =	36%	Hunters per square mile =	1.95
Major Land Type =	Agriculture	Harvest per square mile =	0.82
	Rangeland	Success Rate =	22%
	Forest	%6+ Points =	35%

Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2018	3,252	1,114	713	2,000 - 3,000	425 - 625	250 - 350
Bulls per 100 Cows			34	22		18 - 24	10 - 14

Comparable Survey Totals



Population Surveys

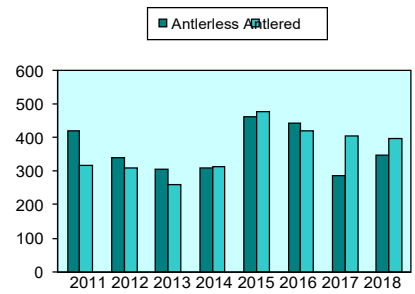
	Survey 1					Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
66/69	2013	1,973	507	982	3,831	2018	3,252	1,114	1,117	5,495
Comparable Surveys Total		1,973	507	982	3,831		3,252	1,114	1,117	5,495
Per 100 Cows			26	50				34	34	

Zone Harvest Statistics

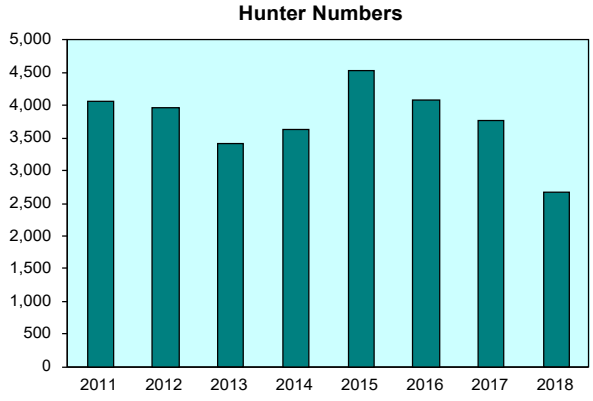
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	421	338	306	308	461	442	285	348
'A' Tag	402	316	272	262	411	346	268	318
'B' Tag	1	4	8	5	4	17	0	5
CH Tag	18	18	26	41	46	79	17	25
Antlered Harvest	316	308	259	313	479	419	404	397
'A' Tag	52	79	76	78	109	76	117	111
'B' Tag	255	218	174	221	362	335	279	272
CH Tag	9	11	9	14	8	8	8	14
Hunter Numbers	4,055	3,960	3,422	3,623	4,542	4,084	3,766	2,671
'A' Tag	2,825	2,829	2,244	2,361	3,115	2,433	2,392	1,287
'B' Tag	1,077	975	1,013	1,114	1,264	1,150	1,252	1,257
CH Tag	153	156	165	148	163	501	122	127
% 6+ Points	27	30	32	32	35	38	37	29

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

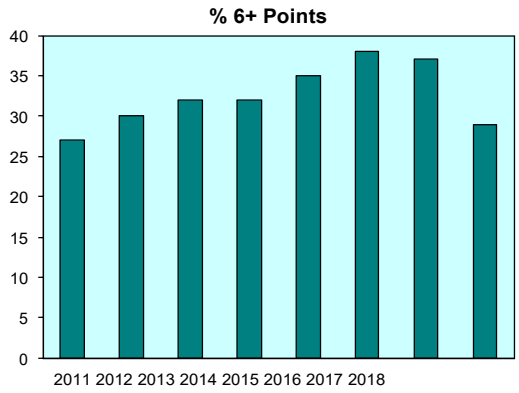


Figure 28. Tex Creek Zone Elk Status and Objectives.

Salmon Zone (GMUs 21, 21A, 28, 36B)

Historical Background

Although present from the time of the first white explorers and trappers, elk were in low abundance in Salmon Zone through much of the twentieth century. From 1917 until the 1940s, parts of GMUs 28 and 36B were designated as no hunting "game preserves." Sixty-two elk from Yellowstone Park were released in Panther Creek drainage (GMU 28) in 1937. As has occurred over much of the west, elk herds have expanded dramatically since the mid-1970s. Aggressive antlerless harvest from 1992 to the late 1990s stabilized and reduced rapidly growing herds in GMUs 21 and 21A, and may have reduced growth rates in the other 2 GMUs.

To stimulate and maintain herd productivity, balance depredation concerns with a reasonably large elk population, and minimize potential impacts on mule deer, a five-year period of herd reduction totaling about 33% of previous numbers was accomplished in GMU 21 in the late 1990s. Antlerless harvest was increased beginning in 2005, but then reduced in all GMUs for 2008 seasons because of a significant reduction in elk numbers across the zone. A quota was established for Salmon Zone B-tags because the 2010 survey showed continued decline in cow and bull numbers. Today, Salmon Zone winters approximately 9,955 elk.

About 3,126 people participated in rifle hunts and 480 in archery hunts in the Salmon Zone in recent years. In 2018 approximately 488 antlered and 286 antlerless elk were harvested. The antlerless harvest is a notable decrease from the previous year of approximately 450 cows and is closer to the historic average of 100 cows annually. This fluctuation in female harvest is due to elk response to increased efforts to alleviate private land depredation in past years and the refinement of hunting efforts in the agricultural interface in GMUs 21A, 28, and 36B.

Management Objectives

Objectives for the Salmon Zone in the 2014 Elk Plan are to maintain the currently healthy, and within objective cow elk populations and increase current bull elk populations. The objectives are to maintain 4,850–7,400 cows, 1,020–1,560 bulls, and 585–885 adult bulls in the salmon zone.

Domestic livestock grazing, mining, and recreation are the dominant human uses of the landscape in Salmon Zone. The Salmon Zone is defined as being moderately limited by agriculture impacts in the 2014 Elk Plan. Management objectives include not only managing biological objectives based on the zones carrying capacity, but also managing for social carrying capacities. Elk depredations on agricultural crops are the major factor in social carrying capacity in this zone and are localized, but are especially pronounced in dry years and during harsh winters. The majority of elk depredations occur in GMUs 21A, 28 and 36B.

Habitat Management and Monitoring

The Salmon Zone is 95% public lands. Currently there are no large scale habitat management projects in place. However, spread of annual invasive grasses and noxious weeds such as knapweed and rush skeleton weed could ultimately have significant impacts on winter range productivity in this zone. This risk is most pronounced post wildfire.

The Salt Fire was a large-scale forest fire occurred in the western portion of GMU 28 in 2000. Another landscape scale 350,000 acre forest fire occurred in 2012 in GMU 21. The most recent wild fire activity was the Rabbit Foot Fire in 2018 near the border of GMU 36B and 28 and encompassed approximately 36,004 acres. Fires set the landscape back from a climax successional state in dense lodge pole stands to an early to mid-seral state. This typically leads to improved elk habitat quality in this zone and is often reflected in calf production and survival.

Biological Objectives

Aerial surveys in 1992 and 1994 found high winter elk densities in GMU 21A, a migratory herd shared by Idaho and Montana. Winter range concerns in Idaho and depredation concerns in Montana prompted significant increases in antlerless hunting in both states with a goal of reducing the herd to 2,000–2,500 wintering elk. The average total antlerless harvest increased from about 100 animals to about 300 animals, and by 2000, the herd was reduced to approximately 1,800 animals. Similar reductions occurred in GMU 21; total winter elk numbers dropped to 1,550 during surveys in 2001. Antlerless elk harvest was discontinued in GMUs 21 and 21A in 2000. The population in GMU 21A dramatically increased by 2005, reaching 3,345 animals. Therefore, antlerless harvest was implemented in the 2005 season. However, by 2008 numbers fell again to the top of objective levels and antlerless harvest was reduced for 2008. GMU 21A continued to see a slight decline in the cow population and a drop of almost half of the bulls between 2008 and 2010. Surveys in 2016 have shown a slight increase in both cow and bull numbers throughout the zone to levels within objective for both.

GMUs 28 and 36B experienced major population increases (57% and 30%, respectively) through the 1990s, despite modest increases in antlerless harvest. Antlerless harvest was reduced after 2000, particularly in GMU 28, in response to low calf: cow ratios. Total population in GMU 36B had been stable, but the sex ratio had become more skewed toward females. In contrast, cow numbers in GMU 28 reached record high numbers in 2005 and exceeded objectives by 1,000 animals. As a group, these GMUs were only moderately productive, averaging 30–35 calves:100 cows during the 1990s; production declined between 2005 and 2010 to average 25:100. Partly as a result of this modest productivity and partly because they are relatively accessible general hunt areas, GMUs 28 and 36B have historically experienced relatively low bull:cow ratios (11 bulls per 100 cows). By 2008, numbers in GMU 36B fell 55% to below objective levels for both cows and bulls and levels in GMU 28 fell by 34%, prompting severe reductions in antlerless harvest.

Quotas were implemented in 2010 for rifle bull tags in the Salmon Zone in order to limit bull harvest in an attempt to increase the bull population. Population objectives for the salmon zone were outlined in the 2014 Elk Plan. These objectives are to maintain 4,850–7,400 cows, 1,020–1,560 bulls, and 585–885 adult bulls in the salmon zone. The ratio of calves per 100 cows increased from 25 in 2010 to 31 at the time of the 2016 survey. This coupled with the increase in total elk from 7,666 to 9,955 are signs of a healthy productive elk herd. From 2010 to the 2016 survey bull ratios increased from 11 to 16 per 100 cows and total bull numbers increased from 606 to 1,092. This increase brought total bull numbers within objectives.

Capture, Radio-mark, and or Telemetry

As part of the Department's elk population monitoring program, adult cows and 6-7 month old calves are often captured and fitted with GPS collars. Biological information is then collected to

answer questions related to survival, cause specific mortality, body condition, pregnancy, and habitat use. In addition these collars are utilized to look at migrations and population connectivity. This information allows managers to make informed decisions regarding current and future species management.

During the 2018 –2019 reporting period, the Department deployed GPS collars and monitored adult female elk in the Salmon zone. Overwinter survival of these individuals was 97%. In addition calves were monitored in the same manner and showed an overwinter survival of 70% during this reporting period. Cause specific mortality study shows that predation is a major factor in elk survival in this zone.

Population Surveys and Monitoring

Population monitoring allows the Department to evaluate elk management towards objectives outlined in the Elk Management Plan and make informed decisions. This monitoring includes estimates of population size, population demographics, and population trends.

Prior to 1980 the department flew aerial surveys in key winter range areas to monitor minimum population size and herd composition and to infer trend. In 1994 the Department developed a sightability model for elk that corrected for probability of detection and allowed the department to generate population estimates. In 2006 elk population surveying and monitoring protocol was further developed to add observer minimum standards, a 3–5 year aerial survey schedule, and to change spatial scale of aerial surveying from the GMU level to the elk management zone level. This robust surveying program and population modeling, coupled with survival and harvest data is currently being utilized to develop an Integrated Population Model (IPM) for elk.

During the 2018–2019 reporting period there was no population surveys conducted in the Salmon elk zone.

Interspecific Issues

This zone contains the majority of the most productive deer GMUs in Salmon Region; parts of GMUs 21, 21A, and 36B contain high densities of wintering deer. Current high elk densities may be having some impact on the area's capacity to produce deer. This may be particularly pronounced during severe winters when deep snow moves elk down onto deer winter ranges. Similar problems may also occur with bighorn sheep, but the amount of habitat overlap is much less.

Predation Issues

In Salmon Zone, cause specific mortalities have been tracked using GPS and VHF radio collars. In general, lion and wolf mortalities are the highest causes of predation. Over the last 2 years of cause specific mortality monitoring lions account for approximately 38% of all elk collar mortalities whereas wolves account for approximately 13%. In the Salmon Zone, black bear densities appear to be moderate but typically do not account for many collared elk mortalities due to collars not being deployed until calves are approximately 6 month of age. However, black bears are known to be a predator on elk neonates and the level of occurrence in the Salmon Zone

has not been documented. Coyotes are common, but not typically known to have much impact on elk populations.

Winter Feeding and Depredation

Formal winter feeding of elk has ceased to exist in Salmon Zone.

Hunting and Harvest Characteristics

Total harvest in the Salmon Zone in 2018 was estimated at 774 elk based on the mandatory harvest report. This represents a 12% decrease in harvest over the previous three-year average of 878. Total hunter numbers were estimated at 3,606 for 2018 compared to 3,446 hunters for 2017. An average of 25% of the bulls harvested in these GMUs over the past 3 years have been 6-point or larger with a 23% hunter success rate for antlered elk and a 34% success rate for all elk.

Disease Monitoring

During the reporting period disease monitoring in the Salmon zone consisted of the statewide standard monitoring of all captured and collared animals. This includes serological assessments on adults and yearling elk for selenium and trace elements, fecal parasites, pregnancy status disease serology for common domestic diseases: Bovine Respiratory Syncytial Virus (BRSV), Bovine Virus Diarrhea (BVD), Parainfluenza Virus 3 (PI3), Leptospirosis, Epizootic Hemorrhagic Disease (EHD)/Bluetongue (BT), Anaplasmosis; and ultrasound comparison to body condition scoring for overall health assessments.

In addition we conducted voluntary chronic wasting disease and brucellosis monitoring. To date no brucellosis or chronic wasting disease has been detected in the Salmon Zone elk herd.

Management Discussion

Impacts of elk on mule deer production and survival are suspected but unknown. The most productive elk herds are those maintained at a level below carrying capacity. Better information is needed to identify appropriate elk densities that will maintain optimum productivity and hunter opportunity.

Elk

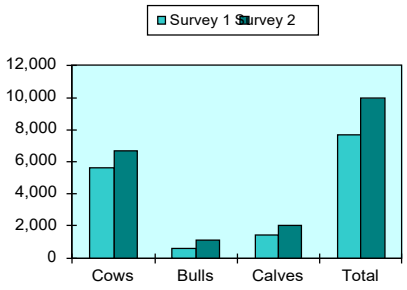
Salmon Zone (GMUs 21, 21A, 28, 36B)

Square Miles =	2,651	3-Year Averages	
% Public Land =	95%	Hunters per square mile =	1.22
Major Land Type =	Forest	Harvest per square mile =	0.60
		Success Rate =	28%
		%6+ Points =	25%

Winter Status & Objectives

Current Status					Objective		
Zone Total	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2016	6,729	1,092	569	4,850-7,400	1,020-1,560	585-885
Bulls per 100 Cows			16	8		18 - 24	10 - 14

Comparable Survey Totals



Population Surveys

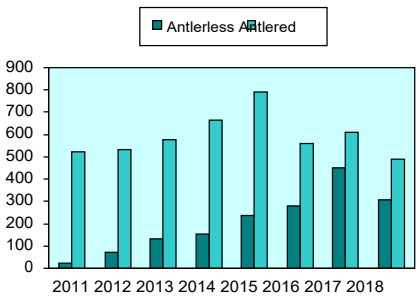
	Survey 1					Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
21	2010	1,012	89	164	1,265	2016	1,465	342	551	2,358
21A	2010	1,776	173	500	3,345	2016	1,623	390	454	2,467
28	2010	2,084	241	531	4,547	2016	1,596	135	453	2,184
36B	2010	756	103	237	1,096	2016	1,975	218	608	2,801
Comparable Surveys Total		5,628	606	1,432	7,666		6,729	1,092	2,030	9,955
Per 100 Cows			11	25				16	30	

Zone Harvest Statistics

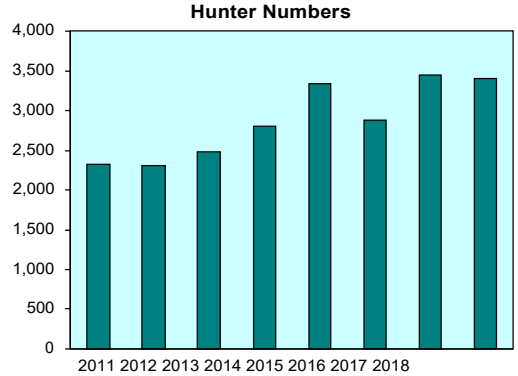
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	23	71	133	156	235	281	450	309
'A' Tag	9	14	80	118	133	106	91	60
'B' Tag	1	5	1	8	0	6	0	1
CH Tag	13	52	52	30	102	169	359	248
Antlered Harvest	520	531	575	665	792	562	608	488
'A' Tag	32	18	17	27	64	56	59	65
'B' Tag	488	513	557	638	728	505	547	423
CH Tag	0	0	1	0	0	1	2	0
Hunter Numbers	2,330	2,308	2,478	2,808	3,339	2,879	3,446	3,402
'A' Tag	266	178	357	459	629	526	589	678
'B' Tag	2,042	2,058	2,041	2,302	2,542	2,123	2,214	2,166
CH Tag	22	72	80	47	168	230	643	558
% 6+ Points	18	22	19	22	26	18	25	34

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

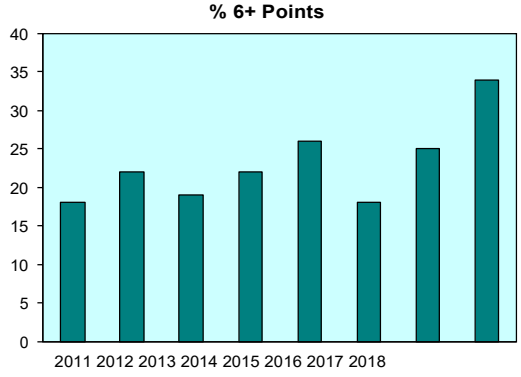


Figure 29. Salmon Zone Elk Status and Objectives.

Lemhi Zone (GMUs 29, 37, 37A, 51)

Historical Background

Elk abundance was low in Lemhi Zone through much of the twentieth century. However, as has occurred over much of the west, elk herds have expanded dramatically over the last couple decades. At the last abundance survey in 2018 the Lemhi Zone wintered approximately 5,062 elk.

In 1992, GMUs 29 and 37A contained strongly-performing elk populations; a base of 1,200 cows was producing 600 calves and 600 bulls. By 1998 and into 2003, the herd had increased to over 1,700 cows, but was still only producing 600 calves. This loss in productivity may have been related to density dependent factors such as limited forage. Between 2007 and 2011 the number of cows decreased to 1300 while maintaining about 600 calves. In 2018, the number of cows increased to almost 1500 and calves declined to about 400, indicating lower productivity.

Management Objectives

Objectives for Lemhi Zone are to maintain the elk population between 1,850–2,950 cows and 600–960 bulls. The Lemhi Zone has been defined as moderately limited by agricultural impacts, and thus harvest objectives are designed to maintain populations within objective while reducing private land depredations. In addition to mitigating depredation concerns with a robust elk population, there is consideration given to minimizing potential impacts on mule deer populations in the area. The current management direction for bulls is to maintain a high quality bull hunt through the controlled hunt system. Hunter opportunity is also a consideration and thus a general season archery hunt is currently in place.

Habitat Management and Monitoring

Cattle ranching, irrigated farming, and outdoor recreation are the dominant human uses of the landscape in Lemhi Zone. The zone is in a generally arid region where forage production can be strongly influenced by growing season precipitation. During drought years mid to low elevation rangeland production can be greatly limited and competition between domestic livestock and elk increases. Elk depredations on agricultural crops are common and are especially pronounced in dry years and harsh winters. Changes in land owner demographics has led to more nontraditional uses of private lands in the Lemhi zone and in many cases elk refuges have been created. This has led to an increase in depredation complaints on adjacent lands and in many cases altered elk spatial use of the landscape.

Elk winter range consists primarily of sagebrush steppe and stands of mountain mahogany in this zone. Spread of annual invasive grasses and noxious weeds, such as knapweed and leafy spurge, could ultimately have significant impacts on winter range productivity. This is of high concern in areas such as the Pahsimeroi River valley where winter range is within close proximity to agricultural lands as reduced winter range quality may lead to increased depredation issues.

Biological Objectives

An abundance survey was conducted in the Lemhi Zone in 2018 and showed a stable population at the upper objective level for cows. However, calf ratios dropped from 44 in the 2011 survey to

23 in the 2018 survey. At the current female harvest rate and calf ratios, model projections are that cow numbers approach the midpoint of objective in a few years. Female harvest may have to then be adjusted to a level that maintains current objectives, while adequately addressing depredation issues.

Capture, Radio-mark, and or Telemetry

As part of the Department's statewide elk population monitoring program, adult cows and 6 –7 month old calves are often captured and fitted with GPS collars. Biological information is then collected to answer questions related to survival, cause specific mortality, body condition, pregnancy, and habitat use. In addition these collars are utilized to look at migrations and population connectivity. This information allows managers to make informed decisions regarding current and future species management.

In February of 2018, 12 GPS collars were deployed on adult cow elk that were located in chronic depredation areas. These collars will be utilized to assess temporal and spatial use of the landscape by depredating elk. This information will allow managers to more effectively address depredation problems while maintaining biologically sound populations. An additional GPS collar was deployed on a cow in GMU 29 in February of 2019 to monitor depredating elk.

Population Surveys and Monitoring

An elk abundance helicopter survey was conducted in the Lemhi Zone in February of 2018. The results of this survey show a pretty stable population with a slight increase in overall elk numbers over the previous survey conducted in 2011. However, calf to cow ratios were found to be considerably lower than the previous survey. Calf ratios dropped from 44 per 100 cows to 23. The winter of 2016/2017 was one of the most severe winters in recent history and may have led to poor body condition of elk going into the 2017 production year. Due to the lack of large scale collaring efforts in the Lemhi this cannot be verified at this time. Calf ratios and population changes will be monitored by managers to evaluate long term effects.

Inter-specific Issues

The Lemhi Zone currently has relatively modest mule deer and whitetail populations and fairly robust rocky mountain bighorn sheep populations. Current high elk densities may be having some impact on deer and sheep winter range browse availability. Elk have the ability to browse forage at heights that reduce availability to the smaller statured deer and sheep, and thus anecdotally may decrease these species winter forage availability. This has not been quantified to date and hence forth the potential impacts to deer and sheep productivity have not been quantified.

Predation Issues

Black bear densities appear to be low and stable in Lemhi Zone. Mountain lion densities appear to be moderate and may have increased slightly as suggested by increased harvest levels in recent years. This could in part be due to prey abundance from robust elk populations. Coyotes are common, but not known to have much impact on elk populations. Wolf densities are low to moderate throughout the zone and do not appear to be impacting elk productivity.

Winter Feeding and Depredation

Elk depredations on growing and stored forage crops are common in this zone. Depredations typically increase as the forage base in the upper elevations starts to cure off. This normally occurs in late August to September. In addition winter conditions can force elk into lower elevations where proximity to stored forage may lead to depredations. The department funded 6 permanent stack yards during the FY19 reporting period to protect stored forage in this zone. In addition, multiple depredation-focused antlerless hunts have been established to address private land depredations.

Winter feeding has not occurred in the Lemhi zone in recent years.

Hunting and Harvest Characteristics

Most of the zone has been managed for decades under conservative controlled hunt strategies. In 1993 GMU 51 changed from a general any-bull season structure to controlled any-bull tags with a general spike only season. About 1,400 people each year participated in rifle hunts in Lemhi Zone through the late 1990s. Hunter numbers have since increased in recent years to approximately 3,000 annually. This is most likely due to increases in archery hunters and more liberal antlerless harvest opportunities.

Conservative bull harvest management has produced good bull to cow ratios and a reputation for mature bulls. The percent of 6 point bulls or better in the total harvest over the last 3 years averaged 46%. In 2018 the percent 6 point or better in the general archery harvest was 40% and in the controlled any weapon hunts was 44% for a combined average of 43%.

Both hunter number and harvest for 2018 showed little change from the previous 3 years with harvested estimated at 980 elk and hunter numbers estimated at 3,081. An average of 46% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger. The 2018 overall hunter success rate (31%) was slightly lower than the three-year average of 34%. These numbers are based off the Mandatory Hunter Reporting system.

Disease Monitoring

During the reporting period, disease monitoring in the Lemhi zone consisted of the statewide standard monitoring of all captured and collared animals. This includes serological assessments on adults and yearling elk for selenium and trace elements, fecal parasites, pregnancy status disease serology for common domestic diseases: Bovine Respiratory Syncytial Virus (BRSV), Bovine Virus Diarrhea (BVD), Parainfluenza Virus 3 (PI3), Leptospirosis, Epizootic Hemorrhagic Disease (EHD)/Bluetongue (BT), Anaplasmosis; and ultrasound comparison to body condition scoring for overall health assessments.

In addition, we conducted voluntary chronic wasting disease and brucellosis monitoring. To date, no brucellosis or chronic wasting disease has been detected in the Lemhi Zone elk herd.

Management Discussion

Impacts of elk on mule deer production and survival are suspected but unknown. The most productive elk herds are those maintained at a level below carrying capacity. Better information

is needed to identify appropriate elk densities that will maintain optimum productivity and still provide ample hunter opportunity. Additional elk collaring may be needed to determine elk movement between the Lemhi and Pioneer zones as exchange between these populations is known, but the extents and impacts are not. Additional elk collaring may be needed in the Pahsimeroi River valley to further address elk refuge ranches and depredations. This collaring data should allow us to more accurately address depredation issues without impacting the overall zone populations.

Elk

Lemhi Zone (GMUs 29, 37, 37A, 51)

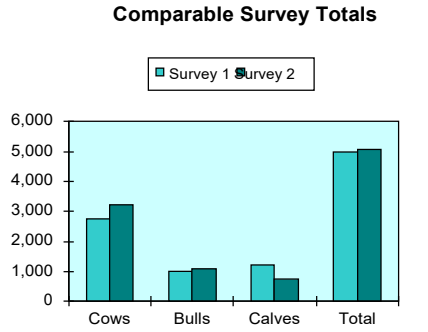
Square Miles =	2,703	3-Year Averages	
% Public Land =	89%	Hunters per square mile =	1.10
Major Land Type =	Rangeland	Harvest per square mile =	0.81
	Forest	Success Rate =	35%
		%6+ Points =	46%

Winter Status & Objectives

Zone Total	Current Status				Objective		
	Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2018	3,247	1,074	787	1,850-2,950	600-960	370-590
Bulls per 100 Cows			33	24		30 - 35	18-22

Population Surveys

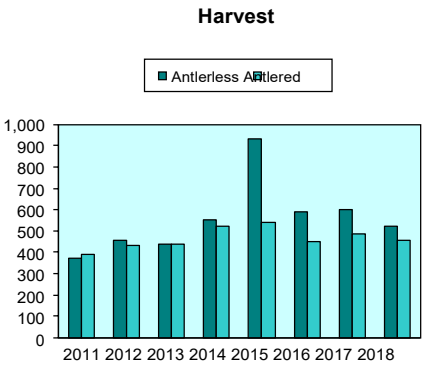
	Survey 1					Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
29/37A	2011	1,381	562	590	2,533	2018	1,463	542	361	2,366
37	2011	614	246	315	1,175	2018	713	341	114	1,168
51	2011	758	197	301	1,256	2018	1,071	191	266	1,528
Comparable Surveys Total		2,753	1,005	1,206	4,964		3,247	1,074	741	5,062
Per 100 Cows			37	44				33	23	

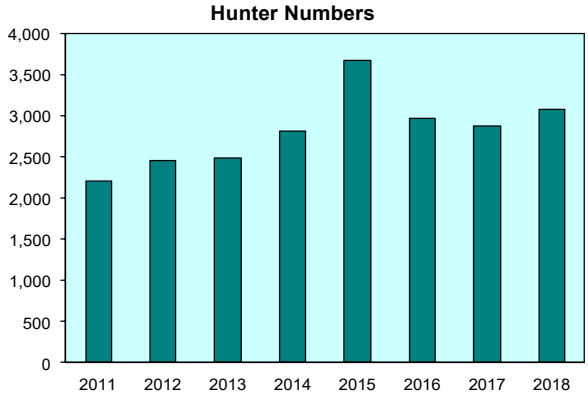


Zone Harvest Statistics

	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	373	459	437	552	930	590	599	524
'A' Tag	95	132	142	277	538	345	263	208
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	278	327	295	275	392	245	336	316
Antlered Harvest	393	431	440	524	539	450	484	456
'A' Tag	158	145	172	245	234	181	202	191
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	235	286	268	279	305	269	282	265
Hunter Numbers	2,203	2,451	2,496	2,821	3,670	2,972	2,883	3,081
'A' Tag	1,104	1,313	1,359	1,745	2,481	1,890	1,673	1,782
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	1,099	1,138	1,137	1,076	1,189	1,082	1,210	1,299
% 6+ Points	41	39	54	45	56	45	48	45

Note: % 6+ pts does not include spike-only harvest.





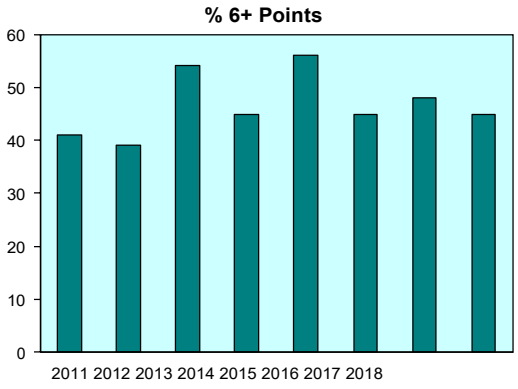


Figure 30. Lemhi Zone Elk Status and Objectives.

Beaverhead Zone (GMUs 30, 30A, 58, 59, 59A)

Historical Background

Elk abundance was low in Beaverhead Zone through much of the twentieth century. In fact, elk numbers were apparently low enough that a few elk from Horse Prairie and Yellowstone National Park were translocated to GMUs 30 and 30A around 1918. GMUs 30 and 30A were closed to hunting through the 1940s, managed as general hunts during the 1950s, and changed to general hunts with harvest quotas in the 1960s. Since 1970, GMUs 30 and 30A have been managed under very conservative controlled hunt strategies. Controlled antlerless hunts were initiated in GMUs 59 and 59A in 1979 and in GMU 58 in 1988. In 1991, GMUs 58, 59, and 59A changed from general any-bull management to general hunting for spike bulls with controlled any-bull tags. In 2010, general spike hunting was eliminated and muzzleloader antlerless hunting was initiated. As has occurred over much of the west, elk herds have expanded dramatically since the mid-1970s. Today, Beaverhead Zone winters approximately 5,000 elk and supports 2,000–2,300 hunters annually. Both hunter numbers and total harvest trended upward between 2009 and 2016.

Many elk in this zone spend winter in Idaho and migrate to summer ranges in Montana. Traditionally, elk in throughout the zone summered in Idaho and wintered in Montana; however, since the early half of the 1980s, more elk in GMUs 58, 59, and 59A are wintering in Idaho. In recent years, high elk densities have become a controversial issue with landowners and livestock grazers in both states. The elk management strategy must include close coordination with Montana Fish Wildlife and Parks due to extensive and variable seasonal migrations across the state boundaries.

Management Objectives

The Beaverhead Elk Zone is a ‘moderately limited by agricultural impacts’ managed Zone per the Department 2014–2024 Elk Plan. Objectives for Beaverhead Zone (Figure 31) are to maintain elk populations within proposed objectives (2,050–3,075 cows and 555–830 bulls). To maintain herd productivity, balance depredation concerns with maintaining a reasonably large elk population, and minimize potential impacts on mule deer. A five-year period of herd reduction totaling about 40% was recommended in GMUs 30 and 30A during the late 1990s. Surveys in 2004 indicated populations were at or slightly below objective levels. Accordingly, cow harvest was reduced to maintain relatively high productivity and stabilize herd size. Surveys in 2009 revealed that cow numbers were at the upper end of the objective range and in 2016 cow numbers were over objective. Antlerless harvest has increased steadily since 2011. The most prominent increase in antlerless harvest has occurred within the agriculture interface to address depredation concerns.

Habitat Management and Monitoring

Cattle ranching, livestock grazing, and recreation are dominant human uses of the landscape in Beaverhead Zone. The zone is in a generally arid region where forage production can be strongly influenced by growing season precipitation. During drought years, high elevation mesic habitats are more heavily utilized by elk while low elevation riparian areas and wet meadows are more heavily utilized by cattle. Elk depredations on agricultural crops are common and are especially pronounced in dry years and harsh winters. Hunting near cultivated fields during August (known

as Greenfield hunts) for antlerless elk were implemented into GMU's 58, 59, 59A and from August through September for GMU 30 for the 2017/2018 hunting season to address these depredations. In addition focused anterless controlled hunts were initiated in GMU 30A to address depredation problems in that unit.

Spread of annual invasive grasses and noxious weeds, such as knapweed and leafy spurge, could ultimately have significant impacts on winter range productivity. Elk wintering on windswept ridgetops in GMUs 59 and 59A are periodically subject to *Oxytropis* poisoning.

Biological Objectives

The elk population in GMU 30 experienced very high growth rates through the mid-1990s, despite attempts to increase antlerless harvest and considerable depredation hunt activity. GMUs 30A, 58, 59, and 59A show relatively stable populations. The most recent population survey indicates that calf production is increasing and bull:cow ratios are stable. The Department is collaring elk in the Zone to provide a better understanding of these migrations to improve management. Montana is collaring elk in the Tendoy's to this end as well, and to monitor for brucellosis; if brucellosis is detected, they will immediately provide a press release. Montana is pursuing additional cow harvest in their general season format to address high elk numbers on traditional winter ranges. Effective 'self-limiting' depredation cow hunt strategies in this Zone need to be flexible with long season dates and liberal tag allocations to harvest cows when they are a problem. However, the Zone resident 'mountain elk' population in Idaho needs to be managed more conservatively. Managers should structure hunts so that depredation hunts do not unduly target these animals. In order to help answer these questions, GPS collars were deployed in GMU 30 on adult cow elk on agriculture fields to follow landscape usage and manage social carrying capacity. These collars were geographically focused rather than distributed across the landscape and may not represent zone level information.

Capture, Radio-mark, and or Telemetry

IDFG deployed 8 depredation-focused GPS collars in GMU 30 in FY2017 and FY2018. These collars went onto adult antlerless elk on agriculture fields. They were deployed alongside the research collars as well as in ground based trapping efforts, but were part of a geographically-focused deployment rather than distributed across the landscape and thus may not be representative of zone-level survival.

Population Surveys and Monitoring

In 2016, this zone was surveyed in January. Both antlered and antlerless elk numbers were above Plan objectives for this zone and calf/cow ratios were high at 44 calves per 100 cows. This population is growing. Antlerless hunting opportunity is good with harvest levels increasing annually and success rates for all elk in the 37% range.

Inter-specific Issues

Although historically the Beaverhead Zone supported high mule deer densities, the zone currently has relatively moderate deer populations. Current high elk densities may be having some impact on deer populations and/or winter range.

When elk numbers are high, as they are currently, livestock operators often perceive elk to be strong competitors for range forage. However, elk generally remove a minor portion of the forage compared to livestock. During some winters, elk move into GMU 63 and cause haystack depredations in the Monteview, Cedar Butte, and Beaver Creek areas. Due to the geography of the Lemhi Valley, elk depredation on stored forage as well as direct elk cattle interactions is typical in GMUs 30 and 30A. In addition on drought years BLM permitted late fall and winter grazing may exacerbate this issue in the lower Lemhi Valley of GMU 30.

Predation Issues

Black bear densities appear to be low and stable in the Beaverhead Zone. Mountain lion densities are moderate and appear to have increased in recent years in GMUs 30 and 30A, probably partly due to increased elk densities. Coyotes are common, but not known to have much impact on elk populations. Wolf densities are relatively low and do not appear to be impacting elk populations.

Winter Feeding and Depredation

Because this is an arid area with relatively little snowfall, winter feeding has not occurred recently in Beaverhead Zone.

Hunting and Harvest Characteristics

Total harvest in the Beaverhead Zone in 2018 was estimated at 956 elk based on mandatory harvest report cards. This is a 3% increase in harvest from 2017 (931) and is slightly below the previous three-year average of 1,007. However the three year average was slightly inflated due to high harvest rates in GMU 30 during the 2016/17 fall and winter to address depredations during the severe winter. Total hunter numbers were estimated at 2,759 for 2018 compared to 2,606 hunters for 2017. An average of 50% of the bulls harvested in these GMUs over the past 3 years (2016–2018) have been 6-point or larger with a 36% hunter success rate (Figure 31).

Disease Monitoring

The Beaverhead Zone is outside of Idaho's Designated Surveillance Area (DSA) for brucellosis. However, the Beaverhead Zone is within one of 3 areas with focused brucellosis surveillance that rotates annually due to its proximity to the Idaho DSA. In addition Montana expanded there DSA to the GMU30A boundary in 2018. As a result additional brucellosis testing occurs opportunistically, particularly when the Department is organizing and implementing winter controlled or depredation hunts when the potential for elk cattle interactions is elevated.

Management Discussion

Impacts of elk on mule deer production and survival are suspected but unknown. The most productive elk herds are those maintained at a level below carrying capacity. Better information is needed to identify appropriate elk densities that will maintain optimum productivity and harvest.

Elk

Beaverhead Zone (GMUs 30, 30A, 58, 59, 59A)

Square Miles =	2,037	3-Year Averages	
% Public Land =	85%	Hunters per square mile =	1.27
Major Land Type =	Rangeland	Harvest per square mile =	1.07
	Forest	Success Rate =	36%
		%6 Points=	50%

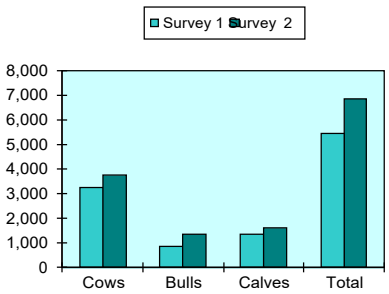
Winter Status & Objectives

Zone Total	Year	Current Status Cows	Bulls	Adult Bulls	Objective Cows	Bulls	Adult Bulls
	2016	3,728	1,358	835	2,050-3,075	555-830	330-485
Bulls per 100 Cows			36	22		25 - 29	14 - 18

Population Surveys

		Survey 1					Survey 2			
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
30	2009	1,380	369	524	2,273	2016	1,527	438	568	2,533
30A	2009	142	161	58	361	2016	27	64	7	98
58	2009	824	180	351	1,355	2016	363	225	187	775
59/59A	2009	911	152	400	1,463	2016	1,732	482	819	3,033
Comparable Surveys Total		3,257	862	1,333	5,452		3,728	1,358	1,627	6,827
Per 100 Cows			26	41				36	44	

Comparable Survey Totals

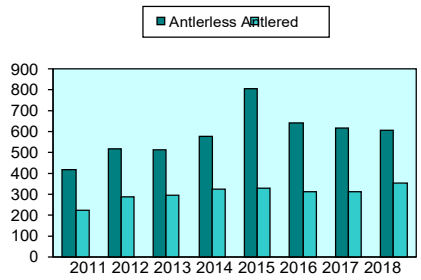


Zone Harvest Statistics

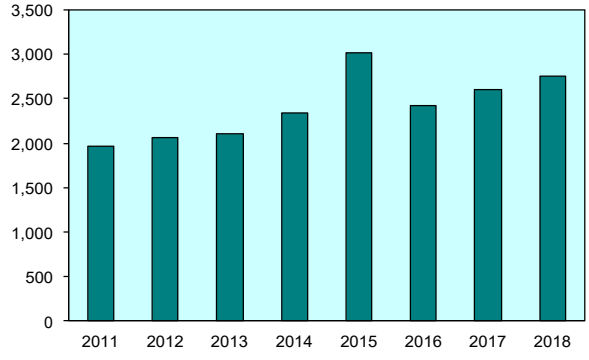
	2011	2012	2013	2014	2015	2016	2017	2018
Antlerless Harvest	419	515	513	576	808	639	619	605
'A' Tag	171	191	192	202	279	238	177	213
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	248	324	321	374	529	401	442	392
Antlered Harvest	221	286	293	322	331	311	312	351
'A' Tag	113	137	137	182	169	161	138	200
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	108	149	156	140	162	150	174	151
Hunter Numbers	1,963	2,063	2,107	2,335	3,015	2,423	2,606	2,759
'A' Tag	1,099	1,233	1,229	1,339	2,016	1,454	1,519	1,703
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	864	830	878	996	999	969	1,087	1,056
% 6+ Points	39	42	45	49	57	48	46	54

Note: % 6+ pts does not include spike-only harvest.

Harvest



Hunter Numbers



% 6+ Points

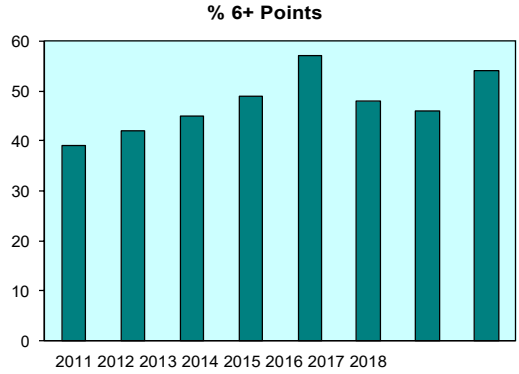


Figure 31. Beaverhead Zone Elk Status and Objectives.

Appendix A

IDAHO

2018 SEASON

ELK RULES

Idaho Big Game
2017 and 2018 Seasons & Rules

2nd Edition, 2018

idfg.idaho.gov

Controlled Hunt Application Periods
Deer, Elk, Pronghorn & Fall Black Bear: May 1 - June 5
Spring Black Bear: January 15 - February 15

Deer, Elk, Pronghorn Seasons: August 2017 - February 2018 & August 2018 - February 2019
Black Bear, Mountain Lion Seasons: August 2017 - June 2018 & August 2018 - June 2019
Gray Wolf Seasons: July 2017 - June 2018 & July 2018 - June 2019
Including Controlled Hunts for Deer, Elk, Pronghorn and Black Bear

2017 ELK POPULATION STATUS BY ELK ZONE

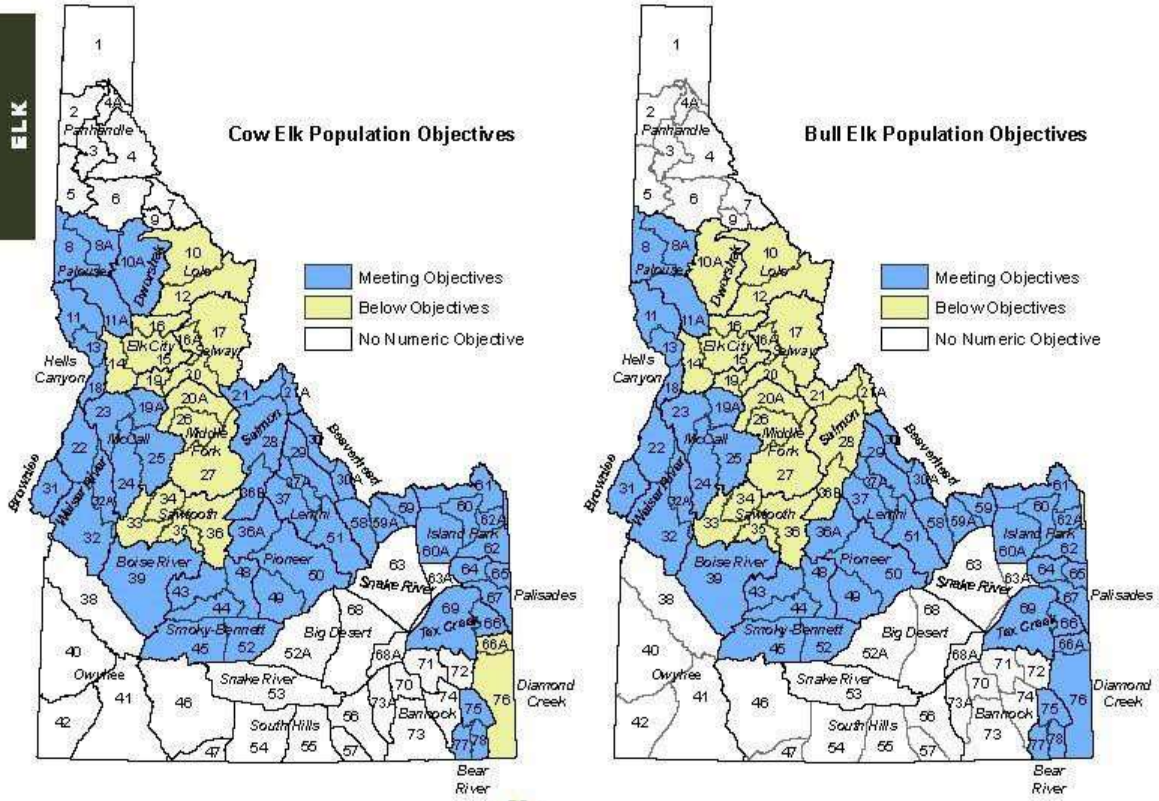
Elk populations fluctuate constantly in response to weather, predation, land management actions, fire events, invasive species, private land use, and development. To maintain elk hunting experiences desired by sportsmen, the Idaho Department of Fish and Game manages herds within desired ranges by adjusting hunting seasons and hunter numbers to provide high quality hunting opportunities, maintain availability of general season hunts with over-the-counter tag sales, and minimize conflicts with agriculture. Fish and Game also works closely with land managers and private landowners to ensure the existence of high quality elk habitat throughout the state. In 2014 we modified the boundaries of a few elk zones to better match up with elk populations and their seasonal movements.

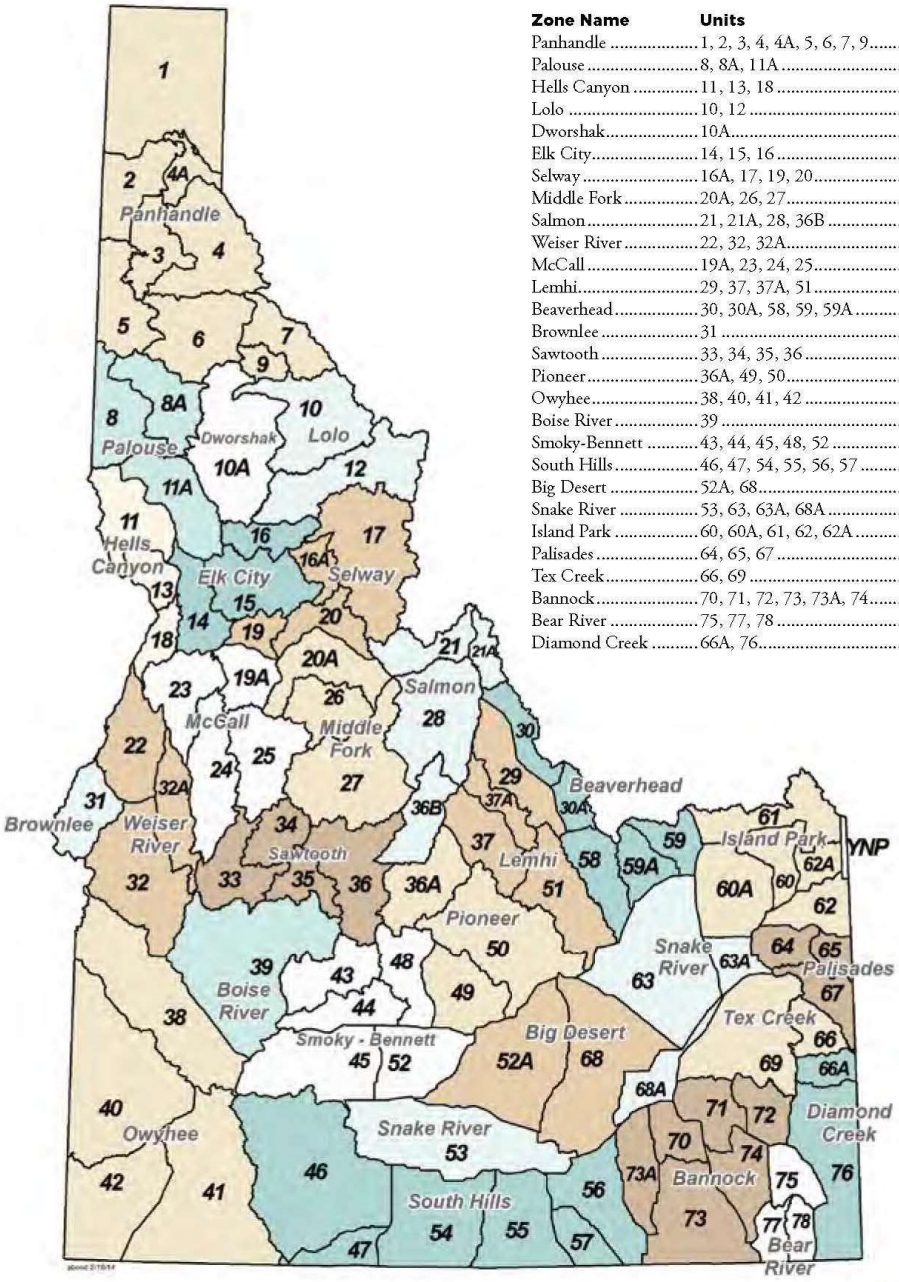
Elk herds currently meet or exceed management objectives in 16 of 22 elk management zones with established numeric objectives for number of cow elk, and in 15 of 22 zones with set objectives for number of bull elk. Hunting opportunities in these zones range from trophy quality bull hunts to "extra" cow hunts. In the handful of zones that are not currently meeting our objectives, we are working hard to improve elk survival and increase the populations by reducing or eliminating cow harvest, adjusting bull harvest, and intensively managing predators to reduce the impacts of predation on those herds.

Changing conditions and management challenges have always been part of the landscape, but with responsive management and more than 107,000 elk, Idaho continues to provide an incredible variety of excellent elk hunting opportunities desired by sportsmen.

For additional information on elk management objectives and hunter success rates, please visit our website at: **https://idfg.idaho.gov/hunt/elk**.

ELK





Zone Name	Units	Page Number
Panhandle	1, 2, 3, 4, 4A, 5, 6, 7, 9	35
Palouse	8, 8A, 11A	35
Hells Canyon	11, 13, 18	36
Lolo	10, 12	36
Dworshak	10A	36
Elk City	14, 15, 16	37
Selway	16A, 17, 19, 20	37
Middle Fork	20A, 26, 27	37
Salmon	21, 21A, 28, 36B	38
Weiser River	22, 32, 32A	38
McCall	19A, 23, 24, 25	39
Lemhi	29, 37, 37A, 51	39
Beaverhead	30, 30A, 58, 59, 59A	40
Brownlee	31	40
Sawtooth	33, 34, 35, 36	40
Pioneer	36A, 49, 50	41
Owyhee	38, 40, 41, 42	41
Boise River	39	41
Smoky-Bennett	43, 44, 45, 48, 52	42
South Hills	46, 47, 54, 55, 56, 57	42
Big Desert	52A, 68	42
Snake River	53, 63, 63A, 68A	43
Island Park	60, 60A, 61, 62, 62A	43
Palisades	64, 65, 67	43
Tex Creek	66, 69	44
Bannock	70, 71, 72, 73, 73A, 74	44
Bear River	75, 77, 78	44
Diamond Creek	66A, 76	45

2017 & 2018 ELK HUNTING SEASONS

Elk hunting is managed in 28 elk zones. Idaho has a two-tag system to offer elk hunters the most general season choices. Hunters may select one zone and choose either an "A tag" or a "B tag" for that zone. A few zones offer only an A tag.
In general, A tags provide more opportunity for muzzleloader and archery hunters, and B tags provide more opportunity for centerfire rifle hunters.

Controlled hunts, allocated by random drawing, are also available in most of the state. Any person who receives a controlled hunt tag for elk is prohibited from hunting in any other elk hunt, **except** for depredation hunts, extra antlerless elk hunts or by buying a leftover nonresident elk tag, if available.

Unsold Nonresident Tags: Residents or nonresidents may buy one unsold nonresident general season deer and elk tag at the nonresident price, starting August 1, to be used as a second tag.

Antlered elk: Only elk with at least one antler longer than 6 inches may be taken in any season which is open for antlered elk only. In antlered seasons, including spike-only, antlers must accompany the carcass while in transit.

Antlerless elk: Only elk without antlers or with antlers shorter than 6 inches may be taken in any season which is open for antlerless elk only.

Spike elk: Only elk with no branching on either antler and at least one antler longer than 6 inches may be taken in any season which is open for spike elk only. A branch is an antler projection at least 1 inch long and longer than the width of the projection.

Brow-tined elk: Only elk having at least one antler with a visible point on the lower half of the main beam which is 4 inches or greater in length may be taken in any season open for brow-tined elk only.

Archery & Muzzleloader Permits

Any person hunting in an "archery only" season, including controlled hunts, must have their license with archery permit validation. Any person hunting in a "muzzleloader" only season, including controlled hunts, must have their license with muzzleloader permit validation.

Youth Only Hunt: Some elk hunts are for youth only. See page105 for more information.

Junior Resident General Elk Tag

Junior resident elk hunters who purchase a general season elk zone tag while they are between ages 10 and 17, inclusive, may participate in any A or B tag elk season within the specified zone, regardless of whether they purchased an A tag or B tag. All other season, weapon restrictions, and commission rules apply. Controlled hunts are excluded.

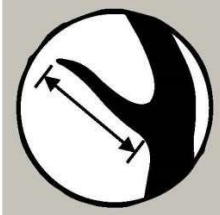
Nonresident Deer and Elk Tags

Nonresident deer and elk tags, excluding Nonresident Junior Mentored/DAV deer and elk tags, are valid to take a black bear, mountain lion or gray wolf instead of a deer or elk, if a season is open for that species, where and when the deer or elk tag is valid, and if there is an open deer or elk season in that same unit.
See page 110.

Chronic Wasting Disease: See page 31 for more information.

Legal in spike elk hunts
SPIKE ELK
One antler must be at least 6 inches or longer. (Not legal in brow-tined elk hunts.)

Not legal in spike elk hunts or brow-tined elk hunts
BRANCH ANTLERED BULL (or larger)
Not legal for spike-only hunts if branched point is longer than 1 inch.



Antler branch is a projection 1 inch or more in length.

Legal in brow-tined elk hunts

Caution - Archers and Muzzleloaders:

"Any weapon" hunts will be open during the archery or muzzleloader season in all or parts of the following zones: Palouse, Salmon, Weiser River, McCall, Lemhi, Beaverhead, Brownlee, Pioneer, Boise River, Smoky-Bennett and South Hills. Please use appropriate caution.

Panhandle Zone (Units 1, 2, 3, 4, 4A, 5, 6, 7, 9)				
	September	**October**	**November**	**December**
A Tag	**Archery only** — antlered **only** Sep 6 - Sep 30	**Any weapon** — antlered **only** Oct 25 - Oct 29	**Muzzleloader only** — antlered **only** Units 4, 7 & 9 **only** Nov 20 - Dec 1	**Muzzleloader only** — antlerless **only** Within 1 mile of private land in the following Units: 1, 2, 3, 4A & 5 **only** Dec 2 - Dec 8
	Archery only — any elk Within 1 mile of private land in the following Units: 1, 2, 3, 4, 4A, 5 & 6 **only** See Note A below Sep 15 - Sep 21			**Archery only** — antlered **only** Dec 10 - Dec 16
B Tag	**Archery only** — antlered **only** Sep 6 - Sep 12	**Any weapon** — antlered **only** Oct 10 - Oct 24 **Any weapon** — any elk Within 1 mile of private land in the following Units: 1, 2, 3, 4, 4A, 5 & 6 **only** See Note A below Oct 15 - Oct 17		**Muzzleloader only** — antlerless **only** Within 1 mile of private land in the following Units: 1, 2, 3, 4A & 5 **only** Dec 2 - Dec 8
Note A	That portion of Unit 4 within the following boundary: starting at the junction of State Highway 97 and State Highway 3 near Harrison, then north on State Highway 3 to Interstate 90, then East on Interstate 90 to Kingston, then north and east on Forest Service Road 9 to the Montana border, and then follow the Unit 4 boundary to the point of beginning.			

Palouse Zone (Units 8, 8A, 11A)				
	August/September	**October**	**November**	**December**
A Tag	**Any weapon** — antlerless **only** Within 1 mile of private cultivated fields outside National Forest System Boundary, See Note 1, Page 45 Aug 1 - Sep 15			**Muzzleloader only** — spike or antlerless Unit 8A **only** Dec 2 - Dec 14
	Archery only — any elk Aug 30 - Sep 30 **See archers caution Page 34**			
B Tag	**Archery only** — spike or antlerless Aug 30 - Sep 14 **See archers caution Page 34**	**Any weapon** — antlered **only** Oct 10 - Oct 24		
		Any weapon — any elk Oct 15 - Oct 21 Private Lands **only**, excluding corporate timber lands		

ELK

Hells Canyon Zone (Units 11, 13, 18) — Controlled Hunts Only				
A Tag	**No A Tags in this Zone — See Controlled Hunts**			
B Tag	**No A Tags in this Zone — See Controlled Hunts**			

Lolo Zone (Units 10, 12)				
	August/September	**October**	**November**	**December**
A Tag	**Archery only** — antlered **only** Aug 30 - Sep 30			
	Note: 404 A Tag Quota Available First-Come, First-Served.		2017 Capped tags go on sale for Residents 7/10/2017 and Nonresidents 12/1/2016.	
			2018 Capped tags go on sale for Residents 7/10/2018 and Nonresidents 12/1/2017.	
B Tag		**Any weapon** — antlered **only** Oct 10 - Nov 3		
	Note: 1,088 B Tag Quota Available First-Come, First-Served.		2017 Capped tags go on sale for Residents 7/10/2017 and Nonresidents 12/1/2016.	
			2018 Capped tags go on sale for Residents 7/10/2018 and Nonresidents 12/1/2017.	

Dworshak Zone (Unit 10A)				
	August/September	**October**	**November**	**December**
A Tag	**Archery only** — any elk Aug 30 - Sep 30			**Muzzleloader only** — spike or antlerless: Dec 2 - Dec 5 spike **only**: Dec 6 - Dec 14
B Tag	**Archery only** — spike or antlerless Aug 30 - Sep 14	**Any weapon** — antlered **only** Oct 10 - Nov 3		
	Note: 2,380 B Tag Quota Available First-Come, First-Served.		2017 Capped tags go on sale for Residents 7/10/2017 and Nonresidents 12/1/2016.	
			2018 Capped tags go on sale for Residents 7/10/2018 and Nonresidents 12/1/2017.	

Elk City Zone (Units 14, 15, 16)				
	August/September	**October**	**November**	**December**
A Tag	**Archery only** — any elk Unit 15 **only** Aug 30 - Sep 30		**Muzzleloader only** — spike or antlerless Units 14 & 16 **only** Nov 21 - Dec 9	**Archery only** — any elk Unit 15 **only** Dec 5 - Dec 20
B Tag	**Archery only** — spike or antlerless Unit 15 **only** Aug 30 - Sep 14	**Any weapon** — antlered **only** Oct 10 - Oct 24		
	Note: 1,790 B Tag Quota Available First-Come, First-Served.		2017 Capped tags go on sale for Residents 7/10/2017 and Nonresidents 12/1/2016.	
			2018 Capped tags go on sale for Residents 7/10/2018 and Nonresidents 12/1/2017.	

Selway Zone (Units 16A, 17, 19, 20)				
	September	**October**	**November**	**December**
A Tag		**Any weapon** — antlered **only** Oct 1 - Oct 31		
	Note: 647 A Tag Quota Available First-Come, First-Served.		2017 Capped tags go on sale for Residents 7/10/2017 and Nonresidents 12/1/2016.	
			2018 Capped tags go on sale for Residents 7/10/2018 and Nonresidents 12/1/2017.	
B Tag	**Any weapon** — antlered **only** Sep 15 - Sep 30		**Any weapon** — antlered **only** Nov 1 - Nov 11	
	Note: 1,067 B Tag Quota Available First-Come, First-Served.		2017 Capped tags go on sale for Residents 7/10/2017 and Nonresidents 12/1/2016.	
			2018 Capped tags go on sale for Residents 7/10/2018 and Nonresidents 12/1/2017.	

Middle Fork Zone (Units 20A, 26, 27)				
	September	**October**	**November**	**December**
A Tag		**Any weapon** — Units 20A & 26: antlered **only** Unit 27: brow-tined bulls **only** Oct 1 - Oct 31		
	Note: 1,551 A Tag Quota Available First-Come, First-Served.		2017 Capped tags go on sale for Residents 7/10/2017 and Nonresidents 12/1/2016.	
			2018 Capped tags go on sale for Residents 7/10/2018 and Nonresidents 12/1/2017.	
B Tag	Any weapon — Units 20A & 26: antlered **only** Unit 27: brow-tined bulls **only** Sep 15 - Sep 30		**Any weapon** — Units 20A & 26: antlered **only** Unit 27: brow-tined bulls **only** Nov 1 - Nov 18	
	Note: 1,636 B Tag Quota Available First-Come, First-Served.		2017 Capped tags go on sale for Residents 7/10/2017 and Nonresidents 12/1/2016.	
			2018 Capped tags go on sale for Residents 7/10/2018 and Nonresidents 12/1/2017.	

ELK

Salmon Zone (Units 21, 21A, 28, 36B)

	August/September	October	November	December
A Tag	**Any weapon** — antlerless **only** Units 21A, 28 & 36B **only** Aug 1 - Sep 30 Within 1 mile of private cultivated fields outside National Forest System Boundary, See Note 1, Page 45			**Archery only** — any elk Unit 28 **only** Dec 1 - Dec 31
	Archery only — any elk Units 21, 21A & 36B **only** Aug 30 - Sep 30 **See archers caution Page 34**			
B Tag		**Any weapon** — antlered **only** Oct 15 - Nov 8		
	Note: 2,507 B Tag Quota Available First-Come, First-Served.		2017 Capped tags go on sale for Residents 7/10/2017 and Nonresidents 12/1/2016. 2018 Capped tags go on sale for Residents 7/10/2018 and Nonresidents 12/1/2017.	

Weiser River Zone (Units 22, 32, 32A)

Motorized Hunting Rule Applies in Units 32 & 32A, August 30 - December 31, See Pages 101 - 103

	August/September	October	November	December
A Tag	**Short range weapons only** — antlerless **only** Units 22 & 32A only: Aug 15 - Sep 30 Outside National Forest System Boundary **only**, See Note A below	**Youth Hunt only** **Any weapon** — antlerless **only** Oct 1 - Oct 9 Short range weapons **only** on Montour WMA		
	Archery only — any elk Aug 30 - Sep 30 **See archers caution Page 34**	**Any weapon** — antlerless **only** Oct 10 - Oct 24 Short range weapons **only** on Montour WMA		
	Note: 1,900 A Tag Quota Available First-Come, First-Served.		2017 Capped tags go on sale for Residents 7/10/2017 and Nonresidents 12/1/2016. 2018 Capped tags go on sale for Residents 7/10/2018 and Nonresidents 12/1/2017.	
B Tag		**Any weapon** — antlered **only** Oct 25 - Nov 3 Short range weapons **only** on Montour WMA	**Any weapon** — antlerless **only** Nov 4 - Nov 18 All of Unit 32 and those portions of Units 22 and 32A within 1 mile of private cultivated fields outside National Forest System Boundary, See Note 1, Page 45, Short range weapons **only** on Montour WMA	
	Note: 4,000 B Tag Quota Available First-Come, First-Served.		2017 Capped tags go on sale for Residents 7/10/2017 and Nonresidents 12/1/2016. 2018 Capped tags go on sale for Residents 7/10/2018 and Nonresidents 12/1/2017.	
Note A	**Note A** - You may hunt only outside the National Forest System Boundary. The National Forest System Boundary is a legislatively set boundary - it is not necessarily the boundary of Forest Service property. State, private, and other lands within the National Forest System Boundary are not open to hunting during this season. (Please refer to a U.S. Forest Service map for the location of this boundary.)			

McCall Zone (Units 19A, 23, 24, 25)				
	August/September	**October**	**November**	**December**
A Tag	**Short range weapons only** — antlerless **only** Units 23 & 24 **only** Outside National Forest System Boundary **only**, See Note A below Aug 15 - Sep 30 *Extremely limited access because of private property*	**Any weapon** — spike **only** Short range weapons **only** within described boundaries in Unit 24, See Note B below Oct 5 - Oct 14	**Short range weapons only** — antlerless **only** Units 23 & 24 **only** Nov 10 - Nov 30	
	Archery only — any elk Aug 30 - Sep 30 **See archers caution Page 34**			
B Tag		**Any weapon** — antlered **only** Oct 15 - Nov 3 Short range weapons **only** within described boundaries, See Note B below.		

Note A - You may hunt only outside the National Forest System Boundary. The National Forest System Boundary is a legislatively set boundary - it is not necessarily the boundary of Forest Service property. State, private, and other lands within the National Forest System Boundary are not open to hunting during this season. (Please refer to a U.S. Forest Service map for the location of this boundary.)

Note B - Short range weapons only in that portion of Unit 24 within the following boundary: Beginning in McCall at the junction of State Highway 55 and Boydstun Street, then south on Boydstun Street to West Valley Road, then west and south along West Valley Road and West Mountain Road to Cabarton Road, then north on Cabarton Road to State Highway 55, then north on State Highway 55 to Farm-To-Market Road, then north on Farm-To-Market Road to Elo Road, then west on Elo Road to State Highway 55, then north on State Highway 55 to the point of beginning.

Lemhi Zone (Units 29, 37, 37A, 51) Motorized Hunting Rule Applies, August 30 - December 31, See Pages 101 - 103				
	August/September	**October**	**November**	**December**
A Tag	**Any weapon** — antlerless **only** Units 29, 37 & 37A **only**: Aug 1 - Sep 30 Unit 51 **only**: Aug 1 - Aug 29 Within 1 mile of private cultivated fields outside National Forest System Boundary, See Note 1, Page 45		**Muzzleloader only** — antlerless **only** Nov 25 - Dec 9	
	Archery only — any elk Aug 30 - Sep 30 **See archers caution Page 34**		**Any weapon** — spike **only** Unit 37 **only** Nov 1 - Nov 7	
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

ELK

Beaverhead Zone (Units 30, 30A, 58, 59, 59A)

Motorized Hunting Rule Applies, August 30 - December 31, See Pages 101 - 103

	August/September	October	November	December
A Tag	**Any weapon** — antlerless **only** Unit 30 **only**: Aug 1 - Sep 30 Units 58, 59 & 59A **only**: Aug 1 - Aug 29 Within 1 mile of private cultivated fields outside National Forest System Boundary, See Note 1, Page 45	**Muzzleloader only** — antlerless **only** Oct 15 - Oct 31		
	Archery only — any elk Aug 30 - Sep 30 **See archers caution Page 34**			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Brownlee Zone (Unit 31)

	August/September	October	November	December
A Tag	**Archery only** — any elk Aug 30 - Sep 30 **See archers caution Page 34**			
	Short range weapons only — antlerless **only**, Aug 15 - Sep 30 Within 1 mile of private cultivated fields outside National Forest System Boundary, See Note 1 Page 45			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Sawtooth Zone (Units 33, 34, 35, 36)

	August/September	October	November	December
A Tag	**Archery only** — any elk Aug 30 - Sep 30			
	Note: 566 A Tag Quota Available First-Come, First-Served. ***Resident capped tag*** *sales will be sold separately at vendors and online.* *For details see "What's New" on page 6.*		2017 Capped tags go on sale for Residents 7/12/2017 and Nonresidents 5/10/2017.	
			2018 Capped tags go on sale for Residents 7/12/2018 and Nonresidents 12/1/2017.	
B Tag		**Any weapon** — antlered **only** Oct 15 - Nov 8		
	Note: 1,526 B Tag Quota Available First-Come, First-Served. ***Resident capped tag*** *sales will be sold separately at vendors and online.* *For details see "What's New" on page 6.*		2017 Capped tags go on sale for Residents 7/12/2017 and Nonresidents 5/10/2017.	
			2018 Capped tags go on sale for Residents 7/12/2018 and Nonresidents 12/1/2017.	

Pioneer Zone (Units 36A, 49, 50) Motorized Hunting Rule Applies, August 30 - December 31, See Pages 101 - 103				
	August/September	October	November	December
A Tag	**Any weapon** — antlerless **only** Unit 36A **only**: Aug 1 - Sep 30 Unit 50 **only**: Aug 1 - Aug 29 Within 1 mile of private cultivated fields outside National Forest System Boundary, See Note 1, Page 45 **Archery only** — any elk Aug 30 - Sep 30 **See archers caution Page 34**		**Muzzleloader only** — antlerless **only** Nov 1 - Nov 14 Units 36A & 50 **only**	
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Owyhee Zone (Units 38, 40, 41, 42) — Controlled Hunts Only				
	August/September	**October**	**November**	**December**
A Tag	**No A Tags in this Zone — See Controlled Hunts**			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Boise River Zone (Unit 39)				
	September	**October**	**November**	**December**
A Tag			**Archery only** — any elk See Note A below, Nov 10 - Nov 30 **See archers caution Page 34**	
B Tag			**Any weapon** — antlered **only** Portion of Unit **closed**, See Note B below, Nov 1 - Nov 9	
Note A	**Unit 39 Archery Hunt CLOSED Area:** That portion of Unit 39 within Ada County, and that portion of Unit 39 within the following boundary: Beginning at the intersection of State Highway 21 and the Middle Fork Boise River Road (Forest Road 268), east on Forest Road 268 to Cottonwood Creek-Thorn Creek Road (Forest Road 377), to South Fork of Thorn Creek to confluence of Thorn Creek, north and west on Thorn Creek to the confluence with Mores Creek, south and west along the center of Mores Creek including the Mores Creek arm of Lucky Peak Reservoir to Highway 21 to the point of beginning is **closed**.			
Note B	**Portion of Unit 39 closed:** That portion of Unit 39 south and east of Blacks Creek Road and south of the South Fork of Boise River is **closed**.			

ELK

Smoky-Bennett Zone (Units 43, 44, 45, 48, 52)

Motorized Hunting Rule Applies in Units 45 & 52, August 30 - December 31, See Pages 101 - 103

	August/September	October	November	December
A Tag	**Archery only** — any elk Units 43 & 48 **only** Aug 30 - Sep 30 **See archers caution Page 34**			
B Tag	**Muzzleloader only** — antlerless **only** Units 45 & 52 **only** Sep 1 - Sep 14			

South Hills Zone (Units 46, 47, 54, 55, 56, 57)

Motorized Hunting Rule Applies in Units 47 & 56, August 30 - December 31, See Pages 101 - 103

	August/September	October	November	December
A Tag	**Archery only** — any elk Units 55, 56 & 57 **only** Aug 30 - Sep 30 **See archers caution Page 34**		**Muzzleloader only** — antlerless **only** Unit 56 **only** Nov 1 - Nov 14 **See muzzleloaders caution Page 34**	
B Tag	**Any weapon** — antlerless **only** Units 46, 47 & 54 **only** Aug 1 - Aug 29 Within 1 mile of private cultivated fields outside National Forest System Boundary, See Note 1, Page 45			

Big Desert Zone (Units 52A, 68)

Motorized Hunting Rule Applies in Unit 52A, August 30 - December 31, See Pages 101 - 103

	August/September	October	November	December
A Tag	**Archery only** — any elk Aug 30 - Sep 30			
	Archery only — any elk Unit 68 **only**: Aug 1 - Aug 30 Within 1 mile of private cultivated fields			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Snake River Zone (Units 53, 63, 63A, 68A) Motorized Hunting Rule Applies in Unit 53, August 30 - December 31, See Pages 101 - 103				
	August/September	**October**	**November**	**December**
A Tag	**Archery only** — any elk Unit 68A **only**: Aug 1 - Sep 30	**Any weapon** — antlerless **only** Unit 63 **only**: Sep 1 - Dec 31 Short range weapons **only** on Mud Lake WMA		
	Any weapon — any elk Unit 63 **only**: Aug 1 - Aug 31 Short range weapons **only** on Mud Lake WMA	**Short range weapons only** — antlerless **only** Unit 63A **only**: Sep 1 - Nov 30		
	Short range weapons only — any elk Unit 63A **only**: Aug 1 - Aug 31	**Archery only** — antlerless **only** Unit 68A **only**: Oct 1 - Dec 31		
	Short range weapons only — any elk Unit 53 **only**: Aug 1 - Dec 31			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Island Park Zone (Units 60, 60A, 61, 62, 62A)				
	August/September	**October**	**November**	**December**
A Tag	**Archery only** — any elk Aug 30 - Sep 30	**Any weapon** — spike **only** Oct 15 - Oct 28 Short range weapons **only** on Chester Wetlands WMA	**Muzzleloader only** — spike or antlerless Unit 61 **only** Nov 11 - Dec 9	
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Palisades Zone (Units 64, 65, 67)				
	August/September	**October**	**November**	**December**
A Tag	**Archery only** — any elk Aug 30 - Sep 30	**Any weapon** — antlerless **only** Oct 22 - Nov 16		
B Tag	**Archery only** — spike or antlerless Aug 30 - Sept 14	**Any weapon** — antlered **only** Oct 15 - Oct 21		

ELK

Tex Creek Zone (Units 66, 69) Motorized Hunting Rule Applies, August 30 - December 31, See Pages 101 - 103				
	August/September	**October**	**November**	**December**
A Tag	**Archery only** — any elk Aug 30 - Sep 30	**Any weapon** — antlerless **only** Oct 22 - Nov 16		
B Tag	**Archery only** — spike or antlerless Aug 30 - Sep 14	**Any weapon** — antlered **only** Oct 15 - Oct 21		

Bannock Zone (Units 70, 71, 72, 73, 73A, 74) Motorized Hunting Rule Applies in Units 70, 72 & 73, August 30 - December 31, See Pages 101 - 103				
	August/September	**October**	**November**	**December**
A Tag	**Archery only** — any elk Aug 30 - Sep 30	**Any weapon** — antlerless **only** Oct 25 - Nov 15		**Muzzleloader only** — antlerless **only** Dec 1 - Dec 31
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Bear River Zone (Units 75, 77, 78) Motorized Hunting Rule Applies, August 30 - December 31, See Pages 101 - 103				
	August/September	**October**	**November**	**December**
A Tag	**Archery only** — any elk Aug 30 - Sep 30	**Any weapon** — antlerless **only** Oct 25 - Nov 15		**Muzzleloader only** — antlerless **only** Dec 1 - Dec 31
B Tag	**Archery only** — spike or antlerless Aug 30 - Sep14	**Any weapon** — antlered **only** Oct 15 - Oct 24		
	Note: 550 B Tag Quota Available First-Come, First-Served.		2017 Capped tags go on sale for Residents 7/10/2017 and Nonresidents 12/1/2016.	
			2018 Capped tags go on sale for Residents 7/10/2018 and Nonresidents 12/1/2017.	

Diamond Creek Zone (Units 66A, 76) Motorized Hunting Rule Applies, August 30 - December 31, See Pages 101 - 103				
	August/September	**October**	**November**	**December**
A Tag	**Archery only** — any elk Aug 30 - Sep 30			
	Note: 1,836 A Tag Quota Available First-Come, First-Served.		2017 Capped tags go on sale for Residents 7/10/2017 and Nonresidents 12/1/2016.	
			2018 Capped tags go on sale for Residents 7/10/2018 and Nonresidents 12/1/2017.	
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

ELK GENERAL SEASON SPECIAL AREA DESCRIPTIONS

• Note 1 — Outside the National Forest System Boundary in Palouse, Salmon, Weiser River, Lemhi, Beaverhead, Brownlee, Pioneer and South Hills Zones: — Antlerless Hunts: These hunts are open only outside the National Forest System Boundary within 1 mile of private fields on which cultivated crops are currently growing. The National Forest System Boundary is a legislatively set boundary — it is not necessarily the boundary of Forest Service property. State, private and other lands within the National Forest System Boundary are not open to hunting during this season. (Please refer to a U.S. Forest Service map for the location of this boundary.) "Private fields on which cultivated crops are currently growing" is defined as: fields on which soil has been used or broken up for the raising of crops, and artificially irrigated pasture. "Currently" means during the current or most recent growing season. Lands enrolled in the Conservation Reserve Program (CRP) or other set-aside farm programs are specifically excluded.

For details on controlled hunt rules and restrictions please see pages 106 - 110.
Hunters: Please check Elk Controlled Hunt Area descriptions on pages 58 -61. Hunt Areas may change.

2017 & 2018 Controlled Elk Hunts (23,850 Tags) Antlered Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2001	11	80	Oct 10 - Nov 3	
2002	18	225	Oct 10 - Nov 3	
2003	19A	10	Oct 1 - Oct 14	
2004	23	10	Oct 1 - Oct 14	
2005	29	180	Oct 1 - Oct 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2006	30	110	Nov 1 - Nov 30	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2007	30-1[a] (See pg 59)	30	Oct 1 - Oct 14	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2008	31	75	Oct 15 - Nov 8	
2009	36A-1[b] (See pg 60)	63	Oct 1 - Oct 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2010	36A-2[a] (See pg 60)	117	Oct 1 - Oct 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2011	37	65	Oct 1 - Oct 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2012	37A	70	Oct 1 - Oct 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2013	40	45	Oct 15 - Nov 24	
2014	40-1[a] (See pg 60)	5	Sep 25 - Oct 14	***Caution:** An archery only hunt is open at the same time*
2015	41-1[b] (See pg 60)	10	Oct 1 - Oct 15	*Very limited access*
2016	41-1[b] (See pg 60)	10	Oct 16 - Oct 31	*Very limited access*
2017	41-1[b] (See pg 60)	10	Nov 1 - Nov 15	*Very limited access*
2018	41-1[b] (See pg 60)	10	Nov 16 - Nov 30	*Very limited access*
2019	42	15	Oct 15 - Nov 24	
2020	43	10	Sep 25 - Oct 10	
2021	43	90	Oct 15 - Nov 9	
2022	44	10	Sep 25 - Oct 10	
2023	44	175	Oct 15 - Nov 9	
2024	45	100	Oct 1 - Oct 31	*Very limited access, Motorized Hunting Rule Applies, See Pages 101 - 103*
2025	46-1[a] (See pg 60)	10	Oct 15 - Nov 9	*Motorized Hunting Rule Applies in Unit 47, See Pages 101 - 103*
2026	46-2[a] (See pg 60)	25	Nov 10 - Nov 30	
2027	46-2[a] (See pg 60)	50	Dec 5 - Dec 31	
2028	48	10	Sep 25 - Oct 10	
2029	48	115	Oct 15 - Nov 9	
2030	49	10	Sep 25 - Oct 10	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2031	49	200	Oct 13 - Nov 9	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2032	50-1[b] (See pg 60)	20	Oct 1 - Oct 14	*Motorized Hunting Rule Applies, See Pages 101 -103*

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions please see pages 106 - 110.

2017 & 2018 Controlled Elk Hunts Antlered Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2033	50-1[b] (See pg 60)	100	Oct 15 - Oct 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2034	51	10	Oct 1 - Oct 14	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2035	51	125	Nov 1 - Nov 30	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2036	52	50	Aug 1 - Aug 29	
2037	52	50	Oct 1 - Oct 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2038	52A-1[a] (See pg 61)	75	Oct 1 - Nov 30	*Motorized Hunting Rule Applies in Unit 52A, See Pages 101 - 103*
2039	54	10	Nov 1 - Nov 14	
2040	55-1[a] (See pg 61)	30	Oct 15 - Oct 31	*Motorized Hunting Rule Applies in Unit 56, See Pages 101 - 103*
2041	58-1[a] (See pg 61)	75	Nov 1 - Nov 30	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2042	60-1[a] (See pg 61)	30	Oct 1 - Oct 14	
2043	60-2[a] (See pg 61)	100	Nov 1 - Nov 30	
2044	61	50	Nov 1 - Nov 10	
2045	66A-1[a] (See pg 61)	35	Oct 1 - Oct 14	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2046	66A-1[a] (See pg 61)	300	Oct 15 - Oct 24	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2047	70-1[a] (See pg 61)	25	Oct 1 - Oct 14	*Motorized Hunting Rule Applies in Units 70, 72 & 73, See Pages 101 - 103*
2048	70-1[a] (See pg 61)	200	Oct 15 - Oct 24	*Motorized Hunting Rule Applies in Units 70, 72 & 73, See Pages 101 - 103*
2049	75-1[a] (See pg 61)	25	Oct 1 - Oct 14	*Motorized Hunting Rule Applies, See Pages 101 - 103*

2017 & 2018 Controlled Hunts Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2050	1-1[b] (See pg 58)	450	Aug 1 - Dec 31	*Private land **only** within 1 mile of currently cultivated fields*
2051	2-1[b] (See pg 58)	100	Aug 1 - Dec 31	*Private land **only** within 1 mile of currently cultivated fields*
2052	3-1[b] (See pg 58)	300	Aug 1 - Dec 31	*Private land **only** within 1 mile of currently cultivated fields*
2053	4-1[b] (See pg 58)	50	Aug 1 - Dec 31	*Private land **only** within 1 mile of currently cultivated fields*
2054	4A-1[b] (See pg 58)	30	Aug 1 - Dec 31	*Private land **only** within 1 mile of currently cultivated fields*
2055	5-1[b] (See pg 58)	300	Aug 1- Dec 31	*Private land **only** within 1 mile of currently cultivated fields*
2056	6-1[b] (See pg 58)	50	Aug 1 - Dec 31	*Private land **only** within 1 mile of currently cultivated fields*
2057	8-1[a] (See pg 58)	75	Oct 20 - Dec 1	
2058	8-2[a] (See pg 58)	200	Oct 20 - Dec 1	
2059	10A-1[b] (See pg 58)	25	Aug 1 - Sep 15	
2060	10A-1[b] (See pg 58)	50	Dec 10 - Dec 31	
2061	11	200	Oct 1 - Oct 24	

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions please see pages 106 - 110.

2017 & 2018 Controlled Hunts Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2062	11	200	Nov 4 - Nov 24	
2063	11-1[b] (See pg 58)	125	Aug 1 - Sep 15	*Very limited access*
2064	11A	150	Oct 20 - Dec 31	*Very limited access*
2065	13	250	Oct 10 - Nov 3	*Very limited access because of few roads and private property*
2066	14-1[b] (See pg 58)	15	Aug 1 - Sep 15	*Very limited access*
2067	14-2[b] (See pg 58)	100	Dec 10 - Dec 31	
2068	16-1[b] (See pg 58)	50	Dec 10 - Dec 31	
2069	18	150	Oct 1 - Oct 25	
2070	18-1[b] (See pg 58)	50	Dec 1 - Dec 31	
2071	19A	25	Oct 15 - Nov 8	
2072	19A-1[b] (See pg 58)	30	Aug 30 - Oct 31	
2073	21A-1[a] (See pg 58)	200	Oct 1 - Dec 31	*On or within 1 mile of cultivated fields outside the National Forest Boundary, See note 1, Page 45, Motorized Hunting Rule Applies, See Pages 101 - 103*
2074	22-1[a] (See pg 58)	300	Oct 25 - Nov 30	
2075	22-2[a] (See pg 58)	300	Dec 1 - Dec 31	
2076	23-1[b] (See pg 59)	50	Oct 1 - Oct 14	
2077	23-1[b] (See pg 59)	30	Oct 15 - Nov 8	
2078	23-2[b] (See pg 59)	75	Oct 5 - Nov 5	*Very limited access*
2079	23-2[b] (See pg 59)	25	Dec 1 - Dec 31	*Very limited access*
2080	23-3[b] (See pg 59)	40	Oct 15 - Nov 8	*Very limited access*
2081	23-3[b] (See pg 59)	25	Dec 1 - Dec 31	*Very limited access*
2082	24-1[b] (See pg 59)	150	Oct 15 - Nov 8	
2083	24-2[b] (See pg 59)	75	Oct 15 - Nov 8	
2084	28-1[b] (See pg 59)	100	Oct 1 - Nov 20	*Portion of Unit **only**, See Hunt Planner or contact the Salmon Regional Office for map of Hunt Area*
2085	28-1[b] (See pg 59)	100	Nov 21 - Dec 31	*Portion of Unit **only**, See Hunt Planner or contact the Salmon Regional Office for map of Hunt Area*
2086	29	70	Nov 1 - Nov 20	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2087	30	160	Dec 1 - Dec 15	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2088	30A-1[b] (See pg 59)	50	Aug 1 - Sep 14	*Portion of Unit **only**, See Hunt Planner or contact the Salmon Regional Office for map of Hunt Area, Motorized Hunting Rule Applies, See Pages 101 - 103*
2089	30A-1[b] (See pg 59)	50	Sep 15 - Oct 14	*Portion of Unit **only**, See Hunt Planner or contact the Salmon Regional Office for map of Hunt Area, Motorized Hunting Rule Applies, See Pages 101 - 103*
2090	31	100	Oct 1 - Oct 14	
2091	31	100	Oct 15 - Nov 8	
2092	32A-1[b] (See pg 59)	50	Dec 1 - Dec 30	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2093	36A-1[b] (See pg 60)	40	Nov 15 - Nov 30	*Motorized Hunting Rule Applies, See Pages 101 - 103*

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions please see pages 106 - 110.

2017 & 2018 Controlled Hunts Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2094	36A-1[b] (See pg 60)	25	Dec 1 - Dec 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2095	36A-2[a] (See pg 60)	150	Nov 15 - Nov 30	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2096	36A-2[a] (See pg 60)	150	Dec 1 - Dec 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2097	36B-1[b] (See pg 60)	100	Oct 1 - Nov 20	*Portion of Unit **only**, See Hunt Planner or contact the Salmon Regional Office for map of Hunt Area*
2098	36B-1[b] (See pg 60)	100	Nov 21 - Dec 31	*Portion of Unit **only**, See Hunt Planner or contact the Salmon Regional Office for map of Hunt Area*
2099	37	60	Oct 15 - Oct 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2100	37	100	Nov 1- Nov 20	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2101	37-1[a] (See pg 60)	200	Oct 1 - Dec 31	*On or within 1 mile of cultivated fields outside the National Forest Boundary, See note 1, Page 45, Motorized Hunting Rule Applies, See Pages 101 - 103*
2102	37-2[b] (See pg 60)	100	Nov 21 - Dec 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2103	37A	90	Nov 1 - Nov 20	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2104	39-1[b] (See pg 60)	550	Oct 5 - Oct 31	
2105	39-2[b] (See pg 60)	400	Oct 5 - Oct 31	
2106	40-1[a] (See pg 60)	100	Oct 15 - Oct 31	
2107	40-1[a] (See pg 60)	50	Nov 1 - Nov 24	
2108	41-1[b] (See pg 60)	50	Nov 16 - Nov 30	*Very limited access*
2109	41-1[b] (See pg 60)	50	Dec 1 - Dec 15	*Very limited access*
2110	41-1[b] (See pg 60)	50	Dec 16 - Dec 31	*Very limited access*
2111	43-1[a] (See pg 60)	100	Oct 15 - Nov 9	
2112	44	125	Oct 15 - Nov 9	
2113	44	75	Nov 10 - Nov 30	
2114	45	50	Aug 1 - Aug 29	*Very limited access*
2115	45	300	Oct 10 - Oct 31	*Very limited access, Motorized Hunting Rule Applies, See Pages 101 - 103*
2116	45	100	Nov 1 - Nov 30	*Very limited access, Motorized Hunting Rule Applies, See Pages 101 - 103*
2117	46-1[a] (See pg 60)	25	Oct 15 - Nov 9	*Motorized Hunting Rule Applies in Unit 47, See Pages 101 - 103*
2118	46-2[a] (See pg 60)	100	Nov 15 - Nov 30	
2119	46-2[a] (See pg 60)	100	Dec 1 - Dec 14	
2120	46-2[a] (See pg 60)	100	Dec 15 - Dec 31	
2121	48-1[b] (See pg 60)	250	Oct 15 - Nov 30	
2122	48-2[b] (See pg 60)	150	Oct 15 - Nov 9	
2123	48-3[a] (See pg 60)	150	Aug 1 - Aug 29	
2124	49	200	Oct 27 - Nov 4	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2125	49	200	Nov 10 - Nov 18	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2126	49	200	Nov 24 - Dec 2	*Motorized Hunting Rule Applies, See Pages 101 - 103*

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions please see pages 106 - 110.

2017 & 2018 Controlled Hunts Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2127	50-1[b] (See pg 60)	200	Nov 15 - Dec 7	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2128	50-2[b] (See pg 61)	200	Dec 8 - Dec 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2129	50-3[b] (See pg 61)	200	Dec 8 - Dec 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2130	51	150	Dec 10 - Dec 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2131	52	50	Aug 1 - Aug 29	
2132	52	100	Oct 1 - Oct 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2133	52	200	Nov 10 - Nov 30	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2134	52A-1[a] (See pg 61)	150	Oct 10 - Nov 30	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2135	54	150	Oct 15 - Oct 31	
2136	55-2[a] (See pg 61)	50	Aug 1 - Aug 29	
2137	56	50	Aug 1 - Aug 29	
2138	58	200	Nov 1 - Nov 30	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2139	59-1[a] (See pg 61)	250	Nov 1 - Nov 30	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2140	60-2[a] (See pg 61)	150	Nov 1 - Nov 30	
2141	61	100	Nov 1 - Nov 10	
2142	66A	300	Oct 25 - Nov 15	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2143	67-1[b] (See pg 61)	75	Oct 22 - Dec 14	*Very limited access, Portion of Unit* ***only***
2144	76	700	Oct 25 - Nov 15	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2145	76-1[a] (See pg 61)	100	Nov 16 - Dec 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*

2017 & 2018 Controlled Hunts Either Sex Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2146	11-1[b] (See pg 58)	10	Aug 1 - Sep 15	*Very limited access*
2147	13	335	Oct 10 - Nov 3	*Very limited access because of few roads and private property*
2148	39-3[b] (See pg 60)	75	Nov 1 - Nov 9	*Very limited access*
2149	45	25	Dec 1 - Dec 31	*Very limited access, Motorized Hunting Rule Applies, See Pages 101 - 103*
2150	52	25	Dec 1 - Dec 31	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2151	62-1[a] (See pg 61)	150	Nov 1 - Nov 30	

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions please see pages 106 - 110.

2017 & 2018 Controlled Hunts Archery Only Elk - Archery Permit Required				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2152	18	75	Aug 30 - Sep 30	*Antlered **only***
2153	39	25	Sep 1 - Sep 30	*Antlered **only**, **Caution, See note 1, Page 53***
2154	40-1[a] (See pg 60)	10	Sep 25 - Oct 14	*Antlered **only**, **Caution, See note 1, Page 53***
2155	41-1[b] (See pg 60)	10	Sep 15 - Sep 30	*Antlered **only**, Very limited access*
2156	44	10	Aug 30 - Sep 24	*Antlered **only***
2157	45-1[a] (See pg 60)	25	Sep 15 - Sep 30	*Antlered **only**, Motorized Hunting Rule Applies, See Pages 101 - 103*
2158	46-1[a] (See pg 60)	15	Aug 30 - Sep 20	*Antlered **only**, Motorized Hunting Rule Applies in Unit 47, See Pages 101 - 103*
2159	54	10	Aug 30 - Sep 24	*Antlered **only***

2017 & 2018 Controlled Hunts Muzzleloader Only Elk - Muzzleloader Permit Required				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2160	11	50	Nov 25 - Dec 4	*Either sex*
2161	22	150	Dec 1 - Dec 31	*Antlerless **only***
2162	24	50	Dec 1 - Dec 20	*Antlerless **only***
2163	30A	50	Nov 1 - Nov 30	*Either sex, Motorized Hunting Rule Applies, See Pages 101 - 103*
2164	32A-2[b] (See pg 60)	150	Dec 1 - Dec 31	*Antlerless **only**, Motorized Hunting Rule Applies, See Pages 101 - 103*
2165	33-1[a] (See pg 60)	25	Nov 10 - Nov 30	*Antlerless **only***
2166	33-2[a] (See pg 60)	50	Nov 10 - Nov 30	*Antlered **only***
2167	36A-1[b] (See pg 60)	25	Nov 1 - Nov 14	*Either sex, Motorized Hunting Rule Applies, See Pages 101 - 103*
2168	36A-2[a] (See pg 60)	125	Nov 1 - Nov 14	*Either sex, Motorized Hunting Rule Applies, See Pages 101 - 103*
2169	39	25	Sep 1 - Sep 30	*Antlered **only**, **Caution, See note 1, Page 53***
2170	39	500	Sep 8 - Sep 30	*Antlerless **only**, **Caution, See note 1, Page 53***
2171	46-1[a] (See pg 60)	10	Sep 25 - Oct 10	*Antlered **only**, Motorized Hunting Rule Applies in Unit 47, See Pages 101 - 103*
2172	50-1[b] (See pg 60)	100	Nov 1 - Nov 14	*Either sex*
2173	54	10	Sep 25 - Oct 14	*Antlered **only***
2174	55-2[a] (See pg 61)	10	Nov 1 - Nov 14	*Antlered **only***
2175	61	200	Nov 11 - Dec 9	*Either sex*
2176	64-1[a] (See pg 61)	50	Oct 1 - Oct 9	*Either sex*
2177	66-1[a] (See pg 61)	50	Oct 1 - Oct 9	*Either sex, Motorized Hunting Rule Applies, See Pages 101 - 103*
2178	76-2[b] (See pg 61)	50	Dec 1 - Dec 31	*Antlerless **only**, Private land **only***

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions please see pages 106 - 110.

2017 & 2018 Controlled Hunts Youth Only - Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2179	1	25	Sep 6 - Sep 30	*Archery **only***
			Oct 10 - Dec 1	*Any weapon*
2180	2	25	Sep 6 - Sep 30	*Archery **only***
			Oct 10 - Dec 1	*Any weapon*
2181	3	25	Sep 6 - Sep 30	*Archery **only***
			Oct 10 - Dec 1	*Any weapon*
2182	4	25	Sep 6 - Sep 30	*Archery **only***
			Oct 10 - Dec 1	*Any weapon*
2183	5	25	Sep 6 - Sep 30	*Archery **only***
			Oct 10 - Dec 1	*Any weapon*
2184	6	25	Sep 6 - Sep 30	*Archery **only***
			Oct 10 - Dec 1	*Any weapon*
2185	29	15	Oct 1 - Nov 20	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2186	30	15	Nov 1 - Dec 15	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2187	36A	25	Oct 1 - Dec 15	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2188	37	25	Oct 1 - Nov 20	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2189	44-1[a] (See pg 60)	150	Nov 10 - Nov 30	*Motorized Hunting Rule Applies in Units 45 & 52, See Pages 101 - 103*
2190	49	100	Oct 13 - Oct 21	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2191	50-1[b] (See pg 60)	100	Oct 15 - Oct 28	*Motorized Hunting Rule Applies, See Pages 101 - 103*
2192	54	25	Aug 1 - Aug 29	
2193	60-1[a] (See pg 61)	50	Oct 15 - Oct 28	
2194	66-1[a] (See pg 61)	100	Oct 22 - Nov 30	*Motorized Hunting Rule Applies, See Pages 101 - 103*

CONTROLLED ELK

2017 & 2018 Controlled Hunts Extra Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2195	18-1X[b] (See pg 58)	150	Oct 1 - Oct 25	*Very limited access, Potential hunter congestion at access points*
2196	18-1X[b] (See pg 58)	150	Nov 4 - Nov 30	*Very limited access, Potential hunter congestion at access points*
2197	32-1X[b] (See pg 59)	175	Aug 1 - Oct 31	*Very limited access, most elk are on private property*
2198	32-1X[b] (See pg 59)	175	Nov 1 - Dec 31	*Very limited access, most elk are on private property*
2199	36AX	250	Oct 1 - Dec 31	
2200	52A-1X[a] (See pg 61)	50	Aug 1 - Aug 29	
2201	52A-1X[a] (See pg 61)	50	Oct 1 - Nov 30	*Motorized Hunting Rule Applies in Unit 52A, See Pages 101 - 103*

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions please see pages 106 – 110.

2017 & 2018 Controlled Hunts Landowner Permission Required - Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2202*	32-1[b] (See pg 59)	100	Aug 1 - Aug 29 Oct 5 - Dec 31	*Motorized Hunting Rule Applies, See Pages 101 - 103* *For application information, See Page 109*
*Landowner Permission Required Hunts are a form of Depredations Hunts. Do not apply for these hunts during the controlled hunt application period. Please see page 109 for application information.				

2017 & 2018 Controlled Hunts Landowner Permission Required EXTRA Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2203*	21A-1X[a] (See pg 58)	400	Oct 1 - Dec 31	*On or within 1 mile of cultivated fields outside the National Forest Boundary, See note 1, Page 45,* *Motorized Hunting Rule Applies, See Pages 101 - 103* *For application information, See Page 109*
2204*	31-1X[b] (See pg 59)	250	Aug 1 - Dec 31	*Short range weapons **only** in a portion of this hunt,* *For application information, See Page 109*
2205*	31-2X[b] (See pg 59)	150	Aug 1 - Sep 30	*For application information, See Page 109*
2206*	39-1X[b] (See pg 60)	300	Oct 1 - Dec 31	*For application information, See Page 109*
2207*	39-4X[b] (See pg 60)	75	Aug 1 - Aug 31 Nov 1 - Dec 31	*For application information, See Page 109*
2208*	41-1X[b] (See pg 60)	75	Nov 1- Dec 31	*For application information, See Page 109*
2209*	44-1X[a] (See pg 60)	150	Aug 1 - Oct 31	*Private land **only**, For application information, See Page 109*
2210*	44-1X[a] (See pg 60)	50	Nov 1 - Dec 31	*Private land **only**, For application information, See Page 109*
2211*	45-1X[b] (See pg 60)	75	Aug 1 - Oct 31	*Private land **only**, For application information, See Page 109*
2212*	45-1X[b] (See pg 60)	25	Nov 1 - Dec 31	*Private land **only**, For application information, See Page 109*
2213*	46-1X[b] (See pg 60)	25	Aug 1 - Oct 31	*Private land **only**, For application information, See Page 109*
2214*	46-1X[b] (See pg 60)	25	Nov 1 - Dec 31	*Private land **only**, For application information, See Page 109*
2215*	49-1X[a] (See pg 60)	200	Aug 1 - Oct 31	*Private land **only**, For application information, See Page 109*
2216*	49-1X[a] (See pg 60)	100	Nov 1 - Dec 31	*Private land **only**, For application information, See Page 109*
2217*	52-1X[b] (See pg 61)	75	Aug 1 - Oct 31	*Private land **only**, For application information, See Page 109*
2218*	52-1X[b] (See pg 61)	25	Nov 1 - Dec 31	*Private land **only**, For application information, See Page 109*
*Landowner Permission Required Hunts are a form of Depredations Hunts. Do not apply for these hunts during the controlled hunt application period. Please see page 109 for application information.				

Note:

1. **Caution archers and muzzleloaders:** An "any weapon" hunt will be open at the same time in this hunt area.

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions please see pages 106 - 110.

2018 Controlled Hunts Extra Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2260	21-1X[a] (See pg 58)	200	Jan 1 - Feb 28	*On or within 1 mile of private cultivated fields **excluding** the Panther and Morgan Creek Drainages.*
2261	22-1X[b] (See pg 58)	200	Jan 1 - Feb 28	*Very limited access*
2262	41-2X[b] (See pg 60)	50	Jan 1 - Jan 14	*Very limited access*
2263	50-1X[b] (See pg 61)	50	Jan 1 - Jan 21	
2264	50-1X[b] (See pg 61)	50	Jan 22 - Feb 15	
2265	51-1X[b] (See pg 61)	25	Jan 1 - Feb 15	
2266	63-1X[a] (See pg 61)	50	Jan 1 - Feb 15	*Short range weapons **only** on Mud Lake WMA*
2267	76-1X[b] (See pg 61)	50	Jan 1 - Jan 31	*Muzzleloader **only**, Private land **only***
These are 2018 hunts. Hunters may apply for these hunts during the 2017 application year. Hunters must purchase a 2018 hunting license before they can pick up these tags. Hunting licenses for 2018 will go on sale December 1, 2017.				

2018 Controlled Hunts Landowner Permission Required EXTRA Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2268*	21-1X[a] (See pg 58)	200	Jan 1 - Feb 28	*On or within 1 mile of private cultivated fields excluding the Panther and Morgan Creek Drainages. Private land **only**, For application information, See Page 109*
2269*	22-2X[b] (See pg 58)	150	Jan 1 - Feb 28	*Private land **only**, For application information, See Page 109*
2270*	31-3X[b] (See pg 59)	50	Jan 1 - Feb 28	*Private land **only**, Short range weapons only in a portion of this hunt, For application information, See Page 109*
2271*	41-1X[b] (See pg 60)	40	Jan 1 - Jan 14	*For application information, See Page 109*
2272*	50-1X[b] (See pg 61)	75	Jan 1 - Feb 15	*For application information, See Page 109*
2273*	51-1X[b] (See pg 61)	25	Jan 1 - Feb 15	*For application information, See Page 109*
*Landowner Permission Required Hunts are a form of Depredations Hunts. Do not apply for these hunts during the controlled hunt application period. Please see page 109 for application information. **These are 2018 hunts.** Hunters may apply for these hunts during the 2017 application year. Hunters must purchase a 2018 hunting license before they can pick up these tags. Hunting licenses for 2018 will go on sale December 1, 2017.				

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.

For details on controlled hunt rules and restrictions please see pages 106 - 110.

2019 Controlled Hunts Extra Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2280	21-1X[a] (See pg 58)	200	Jan 1 - Feb 28	*On or within 1 mile of private cultivated fields **excluding** the Panther and Morgan Creek Drainages.*
2281	22-1X[b] (See pg 58)	200	Jan 1 - Feb 28	*Very limited access*
2282	41-2X[b] (See pg 60)	50	Jan 1 - Jan 14	*Very limited access*
2283	63-1X[a] (See pg 61)	50	Jan 1 - Feb 15	*Short range weapons **only** on Mud Lake WMA*
2284	50-1X[b] (See pg 61)	50	Jan 1 - Jan 21	
2285	50-1X[b] (See pg 61)	50	Jan 22 - Feb 15	
2286	51-1X[b] (See pg 61)	25	Jan 1 - Feb 15	
2287	76-1X[b] (See pg 61)	50	Jan 1 - Jan 31	*Muzzleloader **only**, Private land **only***

These are 2019 hunts. Hunters may apply for these hunts during the 2018 application year. Hunters must purchase a 2019 hunting license before they can pick up these tags. Hunting licenses for 2019 will go on sale December 1, 2018.

2019 Controlled Hunts Landowner Permission Required EXTRA Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2288*	21-1X[a] (See pg 58)	200	Jan 1 - Feb 28	*On or within 1 mile of private cultivated fields excluding the Panther and Morgan Creek Drainages. Private land **only**, For application information, See Page 109*
2289*	22-2X[b] (See pg 58)	150	Jan 1 - Feb 28	*Private land **only**, For application information, See Page 109*
2290*	31-3X[b] (See pg 59)	50	Jan 1 - Feb 28	*Private land **only**, Short range weapons **only** in a portion of this hunt, For application information, See Page 109*
2291*	41-1X[b] (See pg 60)	40	Jan 1 - Jan 14	*For application information, See Page 109*
2292*	50-1X[b] (See pg 61)	75	Jan 1 - Feb 15	*For application information, See Page 109*
2293*	51-1X[b] (See pg 61)	25	Jan 1 - Feb 15	*For application information, See Page 109*

*Landowner Permission Required Hunts are a form of Depredations Hunts. Do not apply for these hunts during the controlled hunt application period. Please see page 109 for application information.

These are 2019 hunts. Hunters may apply for these hunts during the 2018 application year. Hunters must purchase a 2019 hunting license before they can pick up these tags. Hunting licenses for 2019 will go on sale December 1, 2018.

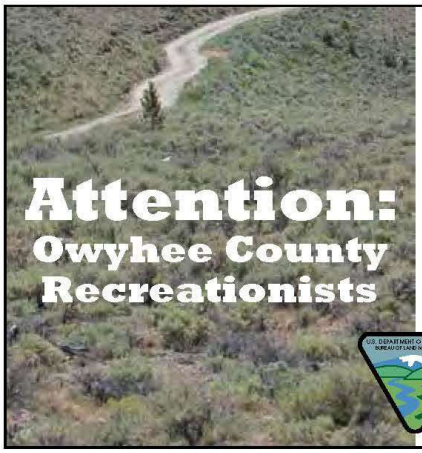
[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions please see pages 106 - 110.

2017 & 2018 Controlled Hunts Outfitter Allocation Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2219	11	5	Oct 10 - Nov 3	*Antlered **only***
2220	13	15	Oct 10 - Nov 3	*Either sex*
2221	18	9	Oct 10 - Nov 3	*Antlered **only***
2222	29	7	Oct 1 - Oct 31	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2223	36A	3	Oct 1 - Dec 15	*Antlerless **only**, Youth hunt **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2224	36A-1[b] (See pg 60)	3	Oct 1 - Oct 31	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2225	36A-1[b] (See pg 60)	1	Nov 1 - Nov 14	*Either Sex, Muzzleloader **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2226	36A-1[b] (See pg 60)	4	Nov 15 - Nov 30	*Antlerless **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2227	36A-1[b] (See pg 60)	1	Dec 1 - Dec 31	*Antlerless **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2228	36A-2[a] (See pg 60)	7	Oct 1 - Oct 31	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2229	36A-2[a] (See pg 60)	4	Nov 1 - Nov 14	*Either Sex, Muzzleloader **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2230	36A-2[a] (See pg 60)	7	Nov 15 - Nov 30	*Antlerless **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2231	36A-2[a] (See pg 60)	4	Dec 1 - Dec 31	*Antlerless **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2232	37	2	Oct 1 - Oct 31	*Antlered **only***
2233	37	3	Oct 1 - Nov 20	*Antlerless **only**, Youth hunt **only***
2234	37	3	Nov 1 - Nov 20	*Antlerless **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2235	37-2[b] (See pg 60)	3	Nov 21 - Dec 31	*Antlerless **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2236	37A	5	Oct 1 - Oct 31	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2237	43	4	Oct 15 - Nov 9	*Antlered **only***
2238	44	2	Oct 15 - Nov 9	*Antlered **only***
2239	45-1[a] (See pg 60)	1	Sep 15 - Sep 30	*Antlered **only**, Archery **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2240	45	3	Oct 1 - Oct 31	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2241	45	1	Dec 1 - Dec 31	*Either Sex,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2242	49	9	Oct 13 - Nov 9	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions please see pages 106 - 110 .

2017 & 2018 Controlled Hunts Outfitter Allocation Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2243	50-1[b] (See pg 60)	4	Oct 15 - Oct 31	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2244	50-1[b] (See pg 60)	3	Nov 1 - Nov 14	*Either Sex, Muzzleloader **only***
2245	54	1	Aug 30 - Sep 24	*Antlered **only**, Archery **only***
2246	54	1	Sep 25 - Oct 14	*Antlered **only**, Muzzleloader **only***
2247	54	2	Oct 15 - Oct 31	*Antlerless **only***
2248	58-1[a] (See pg 61)	2	Nov 1 - Nov 30	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2249	61	2	Nov 1 - Nov 10	*Antlered **only***
2250	61	3	Nov 11 - Dec 9	*Either sex, Muzzleloader **only***
2251	62-1[a] (See Page 61)	15	Nov 1 - Nov 30	*Either sex*
2252	66A-1[a] (See pg 61)	2	Oct 1 - Oct 14	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2253	66A-1[a] (See pg 61)	12	Oct 15 - Oct 24	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 101 - 103*
2254	67-1[b] (See pg 61)	2	Oct 22 - Dec 14	*Antlerless **only**,* *Very limited access, Portion of Unit **only***

Outfitted controlled hunts: Before submitting an application for an outfitter-allocated controlled hunt, hunters must have a written agreement with an outfitter licensed in the hunt area. Successful applicants must hunt with an outfitter licensed for the hunt area. The outfitter must purchase the hunter's tag by August 20. Successful applicants authorize Idaho Fish and Game to provide names and addresses to the outfitters licensed for that controlled hunt. For a list of licensed outfitters in the applicable controlled hunt area, a sample written agreement, and additional information contact the Idaho Outfitters and Guides Licensing Board at **www.oglb.idaho.gov** or by calling 208-327-7380.



Legislation approved in 2009 designated major portions of Owyhee County as wilderness, where access by motorized vehicles is forbidden by law.

A number of access routes were preserved for hunter access. Please check your maps and abide by wilderness regulations.

Maps showing wilderness boundaries can be found at Bruneau, Owyhee and Jarbidge offices of the Bureau of Land Management.

For More Information, Please Contact
BLM Boise District @ 208-384-3300 or the BLM Twin Falls District @ 208-736-2350; or visit the website @ www.id.blm.gov

ELK CONTROLLED HUNT AREA DESCRIPTIONS

Please note that hunt areas are different for each species. For full text of legal description and boundaries for Game Management Units, see pages 84 -93, or visit **http://adminrules.idaho.gov/rules/current/13/0108.pdf**.

Hunt Area 1 — All of Unit 1.

Hunt Area 1-1 — That portion of Unit 1 on private land within one mile of a cultivated field. "Cultivated field" is defined as: fields on which soil has been used or broken up for the raising of crops, and pastureland. "Currently" means during the current or most recent growing season; Except that portion within the Priest River drainage and that portion within the Pend Oreille River drainage downstream from Priest River is **CLOSED**.

Hunt Area 2 — All of Unit 2.

Hunt Area 2-1 — That portion of Unit 2 on private land within one mile of a cultivated field. "Cultivated field" is defined as: fields on which soil has been used or broken up for the raising of crops, and pastureland. "Currently" means during the current or most recent growing season.

Hunt Area 3 — All of Unit 3.

Hunt Area 3-1 — That portion of Unit 3 on private land within one mile of a cultivated field. "Cultivated field" is defined as: fields on which soil has been used or broken up for the raising of crops, and pastureland. "Currently" means during the current or most recent growing season.

Hunt Area 4 — All of Unit 4.

Hunt Area 4-1 — That portion of Unit 4 on private land within one mile of a cultivated field. "Cultivated field" is defined as: fields on which soil has been used or broken up for the raising of crops, and pastureland. "Currently" means during the current or most recent growing season.

Hunt Area 4A-1 — That portion of Unit 4A on private land within one mile of a cultivated field. "Cultivated field" is defined as: fields on which soil has been used or broken up for the raising of crops, and pastureland. "Currently" means during the current or most recent growing season.

Hunt Area 5 — All of Unit 5.

Hunt Area 5-1 — That portion of Unit 5 on private land within one mile of a cultivated field. "Cultivated field" is defined as: fields on which soil has been used or broken up for the raising of crops, and pastureland. "Currently" means during the current or most recent growing season.

Hunt Area 6 — All of Unit 6.

Hunt Area 6-1 — That portion of Unit 6 on private land within one mile of a cultivated field. "Cultivated field" is defined as: fields on which soil has been used or broken up for the raising of crops, and pastureland. "Currently" means during the current or most recent growing season.

Hunt Area 8-1 — That portion of Units 8 and 8A north of the following line: Beginning at the western boundary of Unit 8 at its junction with State Highway 8, then east on Highway 8 to State Highway 9, then northwest on Highway 9 to State Highway 6, then north on Highway 6 to the Unit 8A boundary.

Hunt Area 8-2 — That portion of Units 8 and 8A south of the following line: Beginning at the western boundary of Unit 8 at its junction with State Highway 8, then east on Highway 8 to Forest Service Road 1963 at Helmer, then south and east on Forest Service Road 1963 to Long Meadow Creek, then southeast along Long Meadow Creek to Dworshak Reservoir, then east along the shoreline of Dworshak Reservoir to the Unit 8A boundary at Dent Bridge.

Hunt Area 10A-1 — That portion of Unit 10A west of the Clearwater National Forest boundary, south of Forest Service Road 250, south of State Highway 11 from Pierce to Weippe, and Jim Ford Creek from Weippe to its junction with the Clearwater River.

Hunt Area 11 All of Unit 11.

Hunt Area 11-1 — That portion of Unit 11 within ONE mile of cultivated fields and north and east of the following boundary: Beginning at the Unit 11/13 boundary at the Nez Perce County/Lewis County line, then north on the Nez Perce County/Lewis County line to Soldiers Meadow Road, then west on Soldiers Meadow Road to ZaZa Road, then north on ZaZa Road to Waha Road, then north on Waha Road to Redbird Road, then west on Redbird Road to the boundary of the Craig Mountain WMA, then north and east along the Craig Mountain WMA boundary to the Snake River, then north along the Snake River to the Unit 8/11 boundary.

Hunt Area 11A — All of Unit 11A.

Hunt Area 13 — All of Unit 13.

Hunt Area 14-1 — That portion of Unit 14 west of US 95.

Hunt Area 14-2 — That portion of Unit 14 north and west of the following boundary: Beginning on the Unit 14 western boundary at John Day Creek, then east along the main fork of John Day Creek to the National Forest boundary, then north along the National Forest boundary to Forest Service Road 2025 (Skookumchuck Road), then east along Forest Service Road 2025 to Forest Service Road 243 (Free Use Road), then east along Forest Service Road 243 to Forest Service Road 221, then north along Forest Service Road 221 to the Unit 14 eastern boundary.

Hunt Area 16-1 — That portion of Unit 16 west of the Nez Perce National Forest perimeter boundary.

Hunt Area 18 — All of Unit 18.

Hunt Area 18-1 — That portion of Unit 18 within the Salmon River drainage.

Hunt Area 18-1X — That portion of Unit 18 within the Snake River drainage. This hunt area EXCLUDES that portion of Unit 18 that drains into the Salmon River.

Hunt Area 19A — All of Unit 19A.

Hunt Area 19A-1 — That portion of 19A that drains into the South Fork Salmon River downstream of the South Fork Guard Station Road (Forest Service Road 340).

Hunt Area 21-1X — All of Units 21, 21A, 28, 29, 30, 30A, 36, 36A, 36B, 37, and 37A, on or within 1 mile of cultivated fields EXCLUDING the Panther and Morgan Creek Drainages.

Hunt Area 21A-1 — All of Units 21A, 28, 29, 30, and 30A.

Hunt Area 21A-1X — All of Units 21A, 28, 29, 30, 30A, 36A, 36B, 37, and 37A.

Hunt Area 22 — All of Unit 22.

Hunt Area 22-1 — All of Units 22 and 32A.

Hunt Area 22-2 — All of Units 22, 32 and 32A.

Hunt Area 22-1X — All of Units 22, 31, 32, and 32A.

Hunt Area 22-2X — All of Units 22, 32, and 32A.

Hunt Area 23 — All of Unit 23.

Hunt Area 23-1 — That portion of Unit 23 within the Little Salmon River drainage, upstream from and including the Boulder Creek drainage on the west side of the Little Salmon River; and upstream from but excluding the Hazard Creek drainage on the east side of the Little Salmon River.

Hunt Area 23-2 — That portion of Unit 23 west of U.S. 95 and north of, but excluding, the Boulder Creek drainage.

Hunt Area 23-3 — That portion of Unit 23 which drains into the Little Salmon River downstream of and including the Hazard Creek Drainage, and that portion of Unit 23 which drains into the main Salmon River.

Hunt Area 24 — All of Unit 24.

Hunt Area 24-1 — That portion of Unit 24 within the following boundary: Beginning at the junction of State Highway 55 and the Warm Lake Road, then east along Warm Lake Road to the Unit 24/25 boundary, then north along the Unit 24/25/19A boundary to the intersection of the Unit 24/19A/23 boundaries, then south along the Unit 24/23/32A boundary to Forest Service Road 186 at No Business Saddle, then southeast on Forest Service Road 186 to West Mountain Road, then south on West Mountain Road to Tamarack Falls Road, then east on Tamarack Falls Road to Norwood Road, then north on Norwood Road to West Roseberry Road, then east on West Roseberry Road to State Highway 55, then south on State Highway 55 to the point of beginning. Except Short Range Weapons only in that portion within the following boundary: Beginning in McCall at the junction of State Highway 55 and Boydstun Street, then south on Boydstun Street to West Valley Road, then west and south along West Valley Road and west Mountain Road to Tamarack Falls Road, then east on Tamarack Falls Road to Norwood Road, then north on Norwood Road to West Roseberry Road, then east on West Roseberry Road to State Highway 55, then south on State Highway 55 to Farm-to-Market Road then north on Farm-to-Market Road, to Elo Road, then west on Elo Road to State Highway 55, then north on State Highway 55 to the point of beginning.

Hunt Area 24-2 — That portion of Unit 24 within the following boundary: Beginning north of Cascade at the junction of State Highway 55 and Warm Lake Road, then north on Highway 55 to West Roseberry Road, then west on West Roseberry Road to Norwood Road, then south on Norwood Road to Tamarack Falls Road, then west on Tamarack Falls Road to West Mountain Road, then north on West Mountain Road to Forest Service Road 186, then northwest on Forest Service Road 186 to No Business Saddle, then south along the Unit 24/32A unit boundary to the intersection of the Unit 24/32A/33 boundaries at Smith's Ferry, then north along the Unit 24/33/25 boundary to Warm Lake Road, then west on Warm Lake Road to the point of beginning. Except Short Range Weapons only within the following boundary: Beginning in Donnelly at the junction of State Highway 55 and West Roseberry Road, then west on West Roseberry Road to Norwood Road, then south on Norwood Road to Tamarack Falls Road, then west on Tamarack Falls Road to West Mountain Road, then south on West Mountain Road to Cabarton Road, then north on Cabarton Road to State Highway 55, then north on State Highway 55 to the point of beginning.

Hunt Area 28-1 — That portion of Unit 28 from and including the Lake Creek drainage to and including the Diamond Creek drainage, and east of Forest Service Road 020.

Hunt Area 29 — All of Unit 29.

Hunt Area 30 — All of Unit 30.

Hunt Area 30-1 — All of Units 30, 30A, 58, 59, and 59A.

Hunt Area 30A — All of Unit 30A.

Hunt Area 30A-1 — That portion of Unit 30A north and west of the following boundary: Beginning at the junction of Highway 28 and McFarland Boulevard, then east on McFarland Boulevard to Eighteenmile Rd., then north on Eighteenmile Rd. to Bull Creek Rd., then east on Bull Creek Rd. to the junction with an unnamed road at the toe of the slope, then north on unnamed road to Hawley Creek Rd., then east on Hawley Creek Rd. to Rocky Canyon Rd., then north on Rocky Canyon Rd. to Highway 29, then west on Highway 29 to Highway 28, then south on Highway 28 to the point of beginning.

Hunt Area 31 — All of Unit 31.

Hunt Area 31-1X — That portion of Unit 31 that drains into the Snake River, upstream from and including the Grouse Creek Drainage to the U.S. Highway 95 bridge in Weiser; and that portion of Unit 31 that drains into Monroe Creek from it's mouth upstream to and including the Sheep Creek drainage. EXCEPT short range weapons only south of the following boundary: beginning at the junction of U.S. Highway 95 and Indianhead Road, then west on Indianhead Road to Jenkins Creek Road, then north on Jenkins Creek Road to Olds Ferry Road, then west on Olds Ferry Road to the Galloway Canal, then north and west on the Galloway Canal to the Snake River which is the Unit 31 boundary.

Hunt Area 31-2X — That portion of Unit 31 outside the National Forest System Boundary that drains into the Weiser River downstream of and including that portion of the Pine Creek drainage south of Mill Creek

Hunt Area 31-3X — Private land within that portion of Unit 31 that drains into the Weiser River downstream of and including that portion of the Pine Creek drainage south of Mill Creek, and that portion of Unit 31 that drains into the Snake River, upstream from and including the Grouse Creek drainage to the U.S. Highway 95 bridge in Weiser. EXCEPT short range weapons only south of the following boundary: beginning at the Unit 31 boundary where Indianhead Road intersects U.S. Highway 95, then west on Indianhead Road to Jenkins Creek Road, then north on Jenkins Creek Road to Olds Ferry Road, then west on Olds Ferry Road to the Galloway Canal, then north and west on the Galloway Canal to the Snake River which is the Unit 31 boundary.

Hunt Area 32-1 — All of Unit 32 south and east of the following boundary: Beginning at the Unit 32 boundary at Gardena, then west on the Brownlee Road to the Sweet Highway, then south to Highway 52, then south and west on Highway 52 to the Unit 32/38 boundary.

Hunt Area 32-1X — That portion of Unit 32 west of the following boundary: Beginning at the Unit 32/38 boundary in Emmett, then north on Highway 52 to the VanDussen Road, then north on the VanDussen Road to the Fourmile Road, then north on the Fourmile Road (which travels along Fourmile Creek) to the Riley Butte Road, then north on the Riley Butte Road to the North Crane Creek Road, then north on the North Crane Creek Road to the Indian Valley Road, then north on the Indian Valley Road to Highway 95. Map will be available at the Southwest, and McCall regional offices and the Fish and Game website at: **https://idfg.idaho.gov/hp/32-1x**.

Hunt Area 32A-1 — That portion of Unit 32A that drains into the Weiser River upstream from and including the Middle Fork Weiser River drainage.

Hunt Area 32A-2 — That portion of Unit 32A that drains into the Payette River drainage and that portion of Unit 32A that drains into the Weiser River drainage downstream from but excluding the Middle Fork Weiser River drainage.

Hunt Area 33-1 — All of Units 33, 34, 35, and 36.

Hunt Area 33-2 — All of Units 33 and 35 and that portion of Unit 34 south and west of the Landmark-Stanley Road.

Hunt Area 36A — All of Unit 36A.

Hunt Area 36A-1 — That portion of Unit 36A west of the East Fork of the Salmon River and that portion east of the East Fork of the Salmon River upstream from and including the West Pass Creek drainage.

Hunt Area 36A-2 — That portion of Unit 36A east of the East Fork of the Salmon River downstream from but excluding the West Pass Creek drainage, and that portion of Unit 50 north of Trail Creek Road and west of U.S. Highway 93, and that portion of Unit 50 north of the Doublespring Pass Road east of U.S. Highway 93.

Hunt Area 36AX — All of Unit 36A.

Hunt Area 36B-1 — That portion of Unit 36B starting from and including the Challis Creek drainage to and including the Garden Creek drainage.

Hunt Area 37 — All of Unit 37.

Hunt Area 37-1 — All of Units 36A, 36B, 37, and 37A.

Hunt Area 37-2 — That portion of Unit 37 south of and including Pennal Gulch drainage to and including the McGown Creek drainage which drains into the Salmon River.

Hunt Area 37A — All of Unit 37A.

Hunt Area 39 — All of Unit 39.

Hunt Area 39-1 — That portion of Unit 39 south and east of State Highway 21.

Hunt Area 39-2 — That portion of Unit 39 north and west of State Highway 21 and that portion of Unit 33 west of Alder Creek Road (Forest Service Road 615) and south of the Payette River.

Hunt Area 39-3 — That portion of Unit 39 south and east of Blacks Creek Road and south of South Fork of Boise River.

Hunt Area 39-1X — That portion of Unit 39 within the following boundary: Beginning at the junction of I-84 and Blacks Creek Road, then east on Blacks Creek Road to the point where Road 189A intersects the Blacks Creek Road, then east on Road 189A to the intersection with Road 189A3, then south on Road 189A3 to USFS Trail No. 500, then southeast on Trail No. 500 to the point it intersects with Road 167D, then southeast on Road 167D until it intersects with the Danskin Lookout Road (Forest Service Road 167), then south on the Danskin Lookout Road to Foothill Road, then south on Foothill Road to Martha Ave., then west on Martha Ave to I-84, then northwest on I-84 to the point of beginning.

Hunt Area 39-4X — That portion of Unit 39, starting at the Highway 55/Highway 17 Junction and following the northern boundary of Unit 39 southeast until the intersection of Forest Service Road 374 at Hawley Mountain, then south along Forest Service Road 374 (Bogus Basin Rd.) to the intersection of Cartwright Road, then west along Cartwright Road until the intersection with Dry Creek Road, then west on Dry Creek Road to HWY 55, then north along Highway 55 to point of beginning.

Hunt Area 40 — All of Unit 40.

Hunt Area 40-1 — All of Units 40 and 42.

Hunt Area 41-1 — That portion of Unit 41 west of the West Fork Bruneau River.

Hunt Area 41-1X — That portion of Unit 41 starting at the junction of Highway 51 and the Rowland Rt Road (signed as Roland Road) then following the Rowland Rt Road south until the intersection with Sheep Creek, following Sheep Creek north and east until the confluence with the Bruneau River, then following the Bruneau River south to the Nevada state line, then west along the Idaho-Neveda state line to Highway 51 and north along Highway 51 to the beginning; excluding the Duck Valley Indian Reservation.

Hunt Area 41-2X — That portion of Unit 41 west of the West Fork Bruneau River.

Hunt Area 42 — All of Unit 42.

Hunt Area 43 — All of Unit 43.

Hunt Area 43-1 — Those portions of Units 43 and 44 west of the Pine-Featherville Road (County Road 61) and Rocky Bar Road (County Road 156).

Hunt Area 44 — All of Unit 44.

Hunt Area 44-1 — All of Units 44, 45, and 52.

Hunt Area 44-1X — Private land only within the follwing boundaries: All of Unit 44 and that portion of Unit 45 within the Camas Creek drainage.

Hunt Area 45 — All of Unit 45.

Hunt Area 45-1 — All of Units 45 and 52.

Hunt Area 45-1X — Private land within Unit 45 excluding that portion within the Camas Creek drainage.

Hunt Area 46-1 — All of Units 46 and 47 and that portion of Unit 41 east of the West Fork Bruneau River.

Hunt Area 46-2 — All of Unit 46 and that portion of Unit 41 east of the West Fork Bruneau River.

Hunt Area 46-1X — Private land within that portion of Unit 46 within Twin Falls County.

Hunt Area 48 — All of Unit 48.

Hunt Area 48-1 — That portion of Unit 48 north of Trail Creek and the Ketchum-Warm Springs Creek-Dollarhide Summit Road.

Hunt Area 48-2 — That portion of Unit 48 south of the Ketchum-Warm Springs Creek-Dollarhide Summit Road.

Hunt Area 48-3 — That portion of Unit 48 south and east of the following boundary: Beginning at the junction of the Deer Creek Road and State Highway 75, then west on the Deer Creek Road (Forest Service Road 097) to the Deer Creek Trail (Forest Service Trail 158), then west on the Deer Creek Trail to the Curran Creek Trail (Forest Service Trail 160), then southwest on the Curran Creek Trail to the Unit 44/48 boundary, and that portion of Unit 44 east of Willow Creek and south and east of Little Beaver Creek and Princess Mine Road.

Hunt Area 49 — All of Unit 49.

Hunt Area 49-1X — Private land within the following boundaries: All of Unit 49, that portion of Unit 52A within Blaine County within the Little Wood, Fish Creek and Huff Creek drainages, that portion of Unit 48 south of the Warm Springs Drainage and within the Big Wood River Drainage, and that portion of Unit 50 within the Copper Creek Drainage.

Hunt Area 50-1 — That portion of Unit 50 south of the Doublespring Pass Road east of U.S. Highway 93, and that portion south of the Trail Creek Road west of U.S. Highway 93.

Hunt Area 50-2 — That portion of Unit 50 south of the Doublespring Pass Road east of U.S. Highway 93, and that portion south of the Trail Creek Road west of U.S. Highway 93 excluding south of the Antelope/Fish Creek Road.

Hunt Area 50-3 — That portion of Unit 50 south of the Antelope/Fish Creek Road and west of Highway 93.

Hunt Area 50-1X — Those portions of Unit 50 that are outside the National Forest System Boundary within 1 mile of private fields on which cultivated crops are currently growing. The National Forest System Boundary is a legislatively set boundary — it is not necessarily the boundary of Forest Service property. State, private and other lands within the National Forest System Boundary are not open to hunting during this season. (Please refer to a U.S. Forest Service map for the location of this boundary.) "Private fields on which cultivated crops are currently growing" is defined as: fields on which soil has been used or broken up for the raising of crops, and artificially irrigated pasture. "Currently" means during the current or most recent growing season. Lands enrolled in the Conservation Reserve Program (CRP) or other set-aside farm programs are specifically excluded.

Hunt Area 51 — All of Unit 51.

Hunt Area 51-1X — Those portions of Unit 51 that are outside the National Forest System Boundary within 1 mile of private fields on which cultivated crops are currently growing. The National Forest System Boundary is a legislatively set boundary — it is not necessarily the boundary of Forest Service property. State, private and other lands within the National Forest System Boundary are not open to hunting during this season. (Please refer to a U.S. Forest Service map for the location of this boundary.) "Private fields on which cultivated crops are currently growing" is defined as: fields on which soil has been used or broken up for the raising of crops, and artificially irrigated pasture. "Currently" means during the current or most recent growing season. Lands enrolled in the Conservation Reserve Program (CRP) or other set-aside farm programs are specifically excluded.

Hunt Area 52 — All of Unit 52.

Hunt Area 52-1X — Private land within all of Unit 52.

Hunt Area 52A-1 — All of Units 52A and 68. (Caution: See Craters of the Moon closure, page 96.)

Hunt Area 52A-1X — That portion of Unit 52A south of the following boundary: Beginning at the junction of the Jim Brown Bridge Road and Highway 93/26, then east along the Jim Brown Bridge Road to the Shale Butte Road, then east along the Shale Butte Road to the Carey-Kimama Road, then south along the Carey-Kimama Road to the Brigham Point/ Bear Trap Cave Road, then east along the Brigham Point/ Bear Trap Cave Road to the Arco-Minidoka Road (Unit 68 boundary), and that portion of Unit 68 in Blaine County and within 1 mile of cultivated fields.

Hunt Area 54 — All of Unit 54.

Hunt Area 55-1 — All of Units 55, 56 and 57.

Hunt Area 55-2 — All of Units 55 and 57.

Hunt Area 56 — All of Unit 56.

Hunt Area 58 — All of Unit 58.

Hunt Area 58-1 — All of Units 58, 59, and 59A.

Hunt Area 59-1 — All of Units 59 and 59A.

Hunt Area 60-1 —All of Units 60, 61, and 62A.

Hunt Area 60-2 — All of Units 60 and 60A.

Hunt Area 61 — All of Unit 61.

Hunt Area 62-1 — That portion of Unit 62 within the national forest boundary, all of Unit 62A, and that portion of Unit 65 east of State Highway 33.

Hunt Area 63-1X — That portion of Unit 63 north of State Highway 33, excluding the Camas National Wildlife Refuge which is closed and including those portions of Units 59 and 59A that are within 1 mile north of State Highway 22.

Hunt Area 64-1 — All of Units 64, 65 and 67.

Hunt Area 66-1 — All of Units 66 and 69.

Hunt Area 66A — All of Unit 66A.

Hunt Area 66A-1 — All of Units 66A and 76.

Hunt Area 67-1 — That portion of Unit 67 south and east of the following boundary, beginning at the US 26 bridge over the South Fork of the Snake River, then east on US 26 to Traughber Road, then north on Traughber Road to US 31, then north on US 31 to the Unit 67 boundary.

Hunt Area 70-1 — All of Units 70, 71, 72, 73, 73A, and 74.

Hunt Area 75-1 — All of Units 75, 77, and 78.

Hunt Area 76 — All of Unit 76.

Hunt Area 76-1 — That portion of Unit 66A within the following boundary: Beginning at the Wyoming-Idaho border and Jackknife Road, then west on Jackknife Road, then south on the Cabin Creek-Haderlie Ridge Trail (Forest Service Trail 460) to the intersection of State Highway 34, then east to the Wyoming border, then north to the Jackknife Road; and that portion of Unit 76 within the following boundary: Beginning at the intersection of State Highway 34 and the Idaho-Wyoming border, then west approximately four miles to the mouth of the South Fork of Tincup Creek and Forest Service Trail 008, then south on Trail 008 to the Stump Creek Road, then south and east along Stump Creek Road to the Idaho-Wyoming border, then north along the Idaho-Wyoming border to the junction of State Highway 34.

Hunt Area 76-2 — Private land within Unit 76.

Hunt Area 76-1X — Private land within Unit 76.

Submitted by:

Micah Ellstrom
Regional Wildlife Manager

Clay Hickey
Regional Wildlife Manager

Rick Ward
Regional Wildlife Manager

Regan Berkley
Regional Wildlife Manager

Mike McDonald
Regional Wildlife Manager

Zach Lockyer
Regional Wildlife Manager

Curtis Hendricks
Regional Wildlife Manager

Greg Painter
Regional Wildlife Manager

Approved by: IDAHO DEPARTMENT OF FISH AND GAME

Martha Wackenhut
Asst. Chief, Bureau of Wildlife
Federal Aid Coordinator

Toby Boudreau, Chief
Bureau of Wildlife